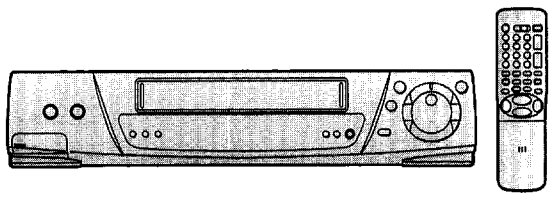
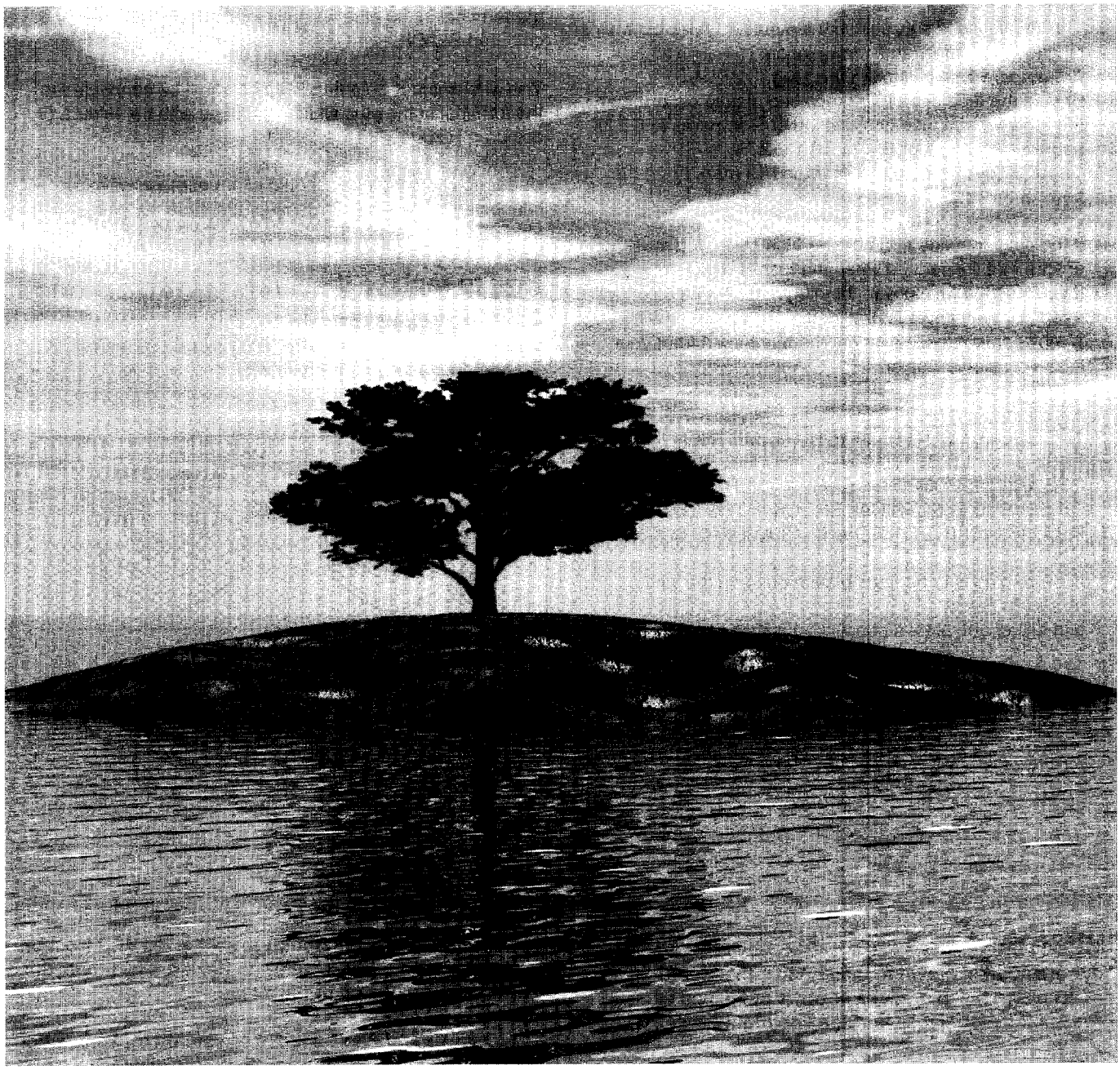
Panasonic

Video Cassette Recorder

NV-HD685B
NV-HD685BL

Operating Instructions





VIDEOPlus+® Q-Link

VHS PAL

SUPER DRIVE MULTI-INTELLIGENT CONTROL II

VQT7943

Before attempting to connect, operate or adjust this product, please read these instructions completely.

Dear Customer

May we take this opportunity to thank you for purchasing this Panasonic Video Cassette Recorder.
We would particularly advise that you carefully study the Operating Instructions before attempting to operate the unit and that you note the listed precautions.

As this equipment gets hot during use, operate it in a well ventilated place; do not install this equipment in a confined space such as a book case or similar unit.

Caution for AC Mains Lead

For your safety please read the following text carefully

This appliance is supplied with a moulded three-pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-amperes and it is approved by ASTA or BSI to BS 1362.
Check for the ASTA mark ⓐ or the BSI mark ⓑ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt, please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol ⏚.

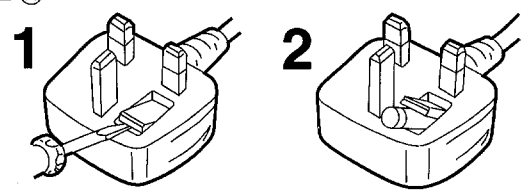
How to replace the Fuse

- There are two types of the AC mains lead assembly: Ⓐ and Ⓑ as shown below.

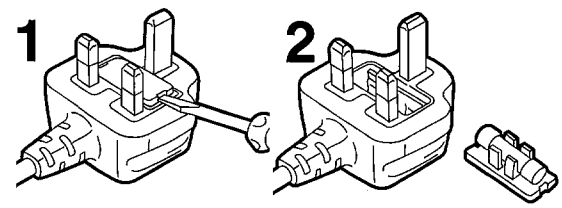
1 Open the fuse compartment with a screwdriver.

2 Replace the fuse and fuse cover.

TYPE Ⓐ



TYPE Ⓑ



IMPORTANT

Your attention is drawn to the fact that the recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

WARNING

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

FOR YOUR SAFETY

■ **DO NOT REMOVE OUTER COVER.**
To prevent electric shock, do not remove cover. There are no user serviceable parts inside. Refer all servicing to qualified service personnel.

Press the VCR-ON/OFF button to switch the VCR from on to standby mode or vice versa. In the standby mode, the VCR is still connected to the mains.

VIDEO Plus+ and PlusCode are registered trademarks of Gemstar Development Corporation. The VIDEO Plus+ system is manufactured under license from Gemstar Development Corporation.

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Checking the Accessories/ Preparing the Remote Control

Check that you have the accessories shown below ☑.

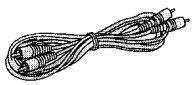
☐ **Operating Instructions**
VQT7943

☐ **Quick Start Guide**
VQC3386
(Only for NV-HD685B)

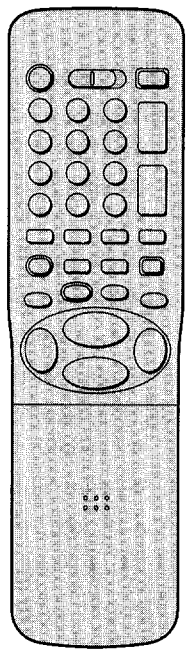
☐ **Guarantee Card**

☐ **Satellite Receiver List**
VQC3528

☐ **Audio Cable**
VJA0231

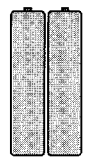


☐ **Remote Control**
VEQ2232



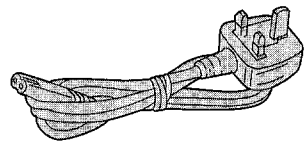
☐ **Batteries for the Remote Control**
R6 size

- The service life of the batteries is approximately 1 year. However, it varies considerably depending on the frequency of use.
- When they are exhausted, replace them with two AA, UM3, or R6 size batteries.

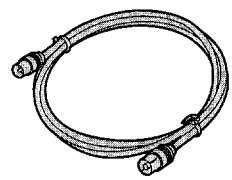


☐ **AC Mains cable**
VJA0733-C, VJA0940 or VJA1022

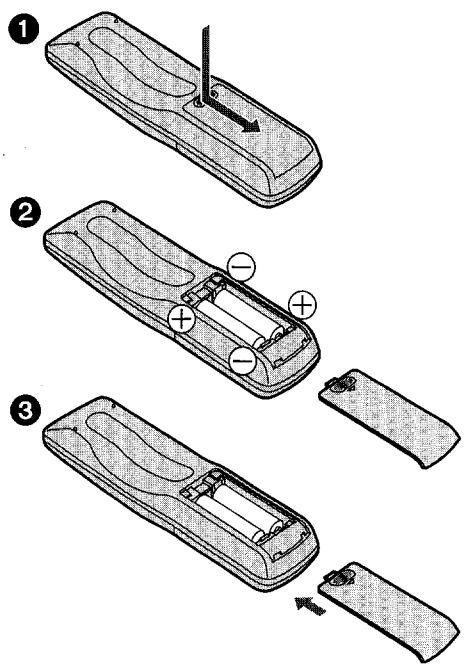
- When you replace the fuse, refer to page 2.



☐ **RF Coaxial cable to connect VCR and TV**
VJA0728-A, VJA0963-A or VJA1089



Inserting Remote Control Batteries



❶ Slide off the battery cover.

❷ Insert the batteries with the polarity (⊕ and ⊖) correctly aligned.

❸ Replace the battery cover.

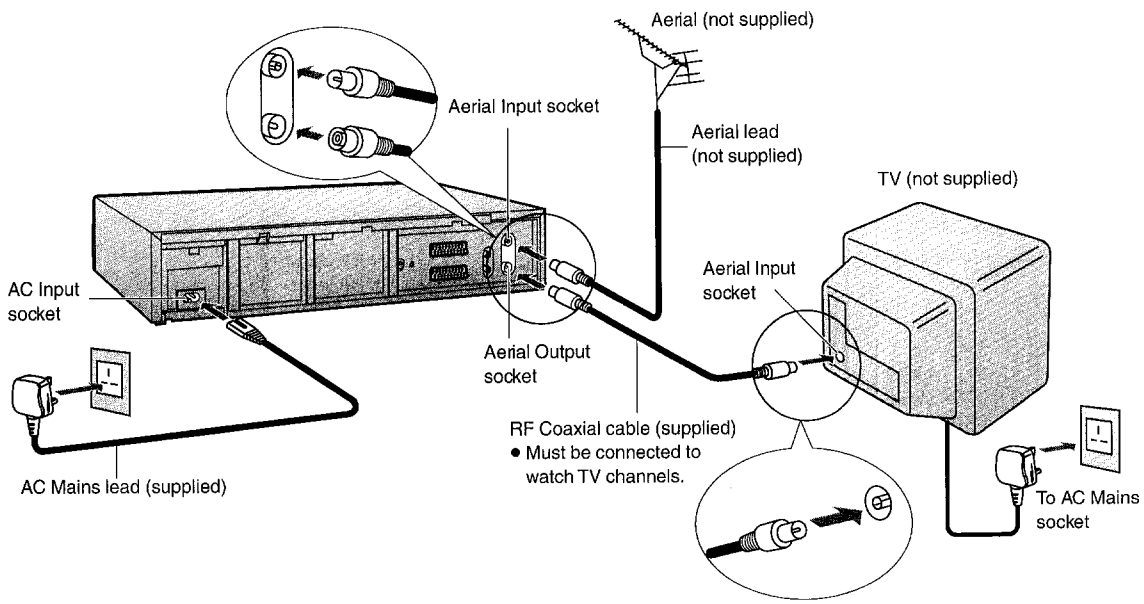
Notes for Battery Replacement:

- When the batteries are exhausted, remove them immediately and dispose of them correctly.
- Make sure that the batteries are inserted with the polarity (⊕ and ⊖) correctly aligned.
- Do not mix old battery with new battery.
- Do not mix different battery types, i.e. Alkaline and Manganese.
- Do not use rechargeable (Ni-Cd) batteries.
- Do not heat or short-circuit the batteries.
- When you do not use the remote control for a long time, take out the batteries and store them in a cool, dry place.

Connecting the VCR to a TV

Method 1.

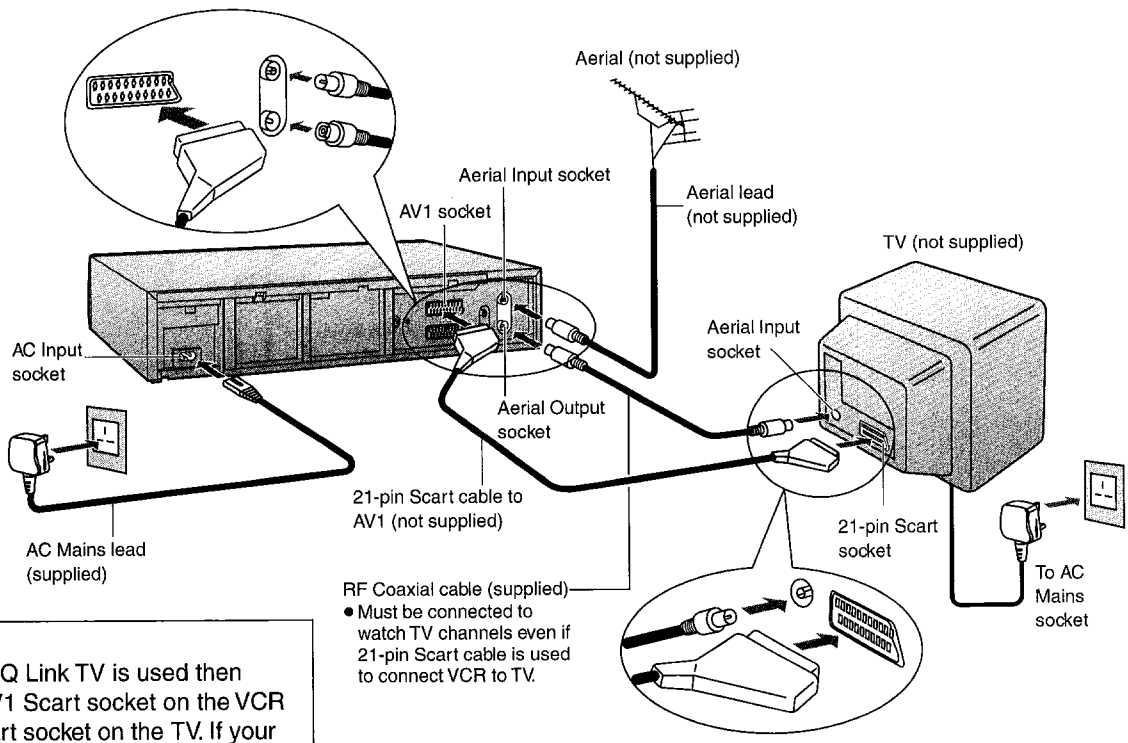
If you are connecting your VCR to a TV using only RF coaxial cable, then follow the steps below.



After completing the above connections, proceed to the Auto Setup page. (Page 7)

or Method 2.

If you are connecting your VCR to a TV using RF coaxial cable and 21-pin Scart cable, then follow the steps below.


Aerial (not supplied)
Aerial Input socket
AV1 socket
Aerial lead (not supplied)
TV (not supplied)
AC Input socket
Aerial Input socket
Aerial Output socket
21-pin Scart cable to AV1 (not supplied)
21-pin Scart socket
AC Mains lead (supplied)
RF Coaxial cable (supplied)
• Must be connected to watch TV channels even if 21-pin Scart cable is used to connect VCR to TV.
To AC Mains socket

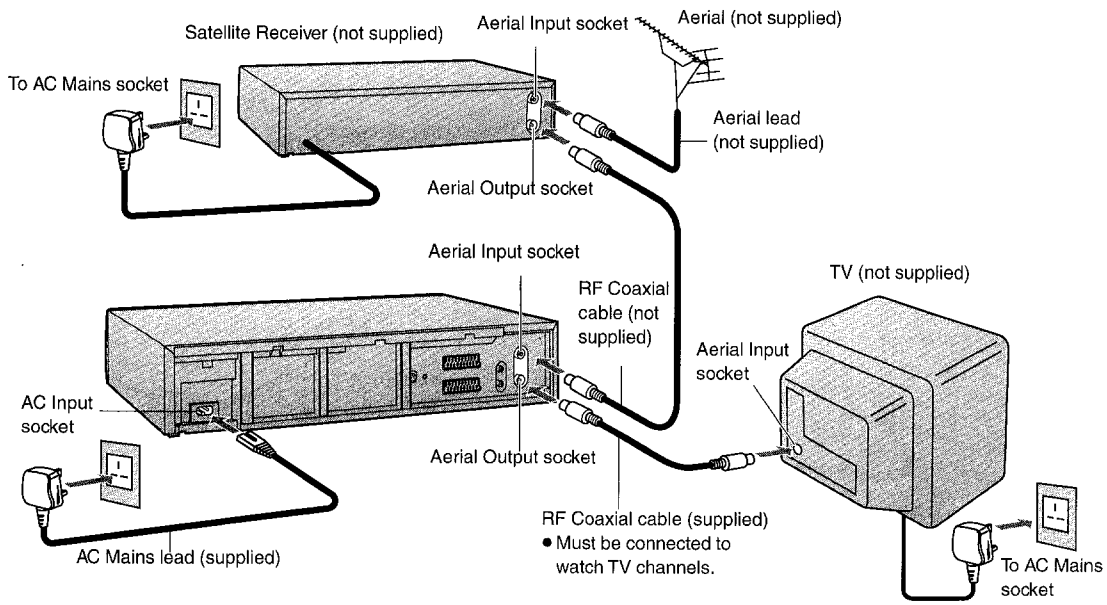
Note:
If a Panasonic Q Link TV is used then connect the AV1 Scart socket on the VCR to the AV2 Scart socket on the TV. If your TV is not a Panasonic Q Link TV, please consult your TV's operating instructions

After completing the above connections, proceed to the Auto Setup page (Page 7) for TV without Q Link, proceed to page 12 for Q Link type TV.

Connecting the VCR to a Satellite Receiver and a TV

Method 1.

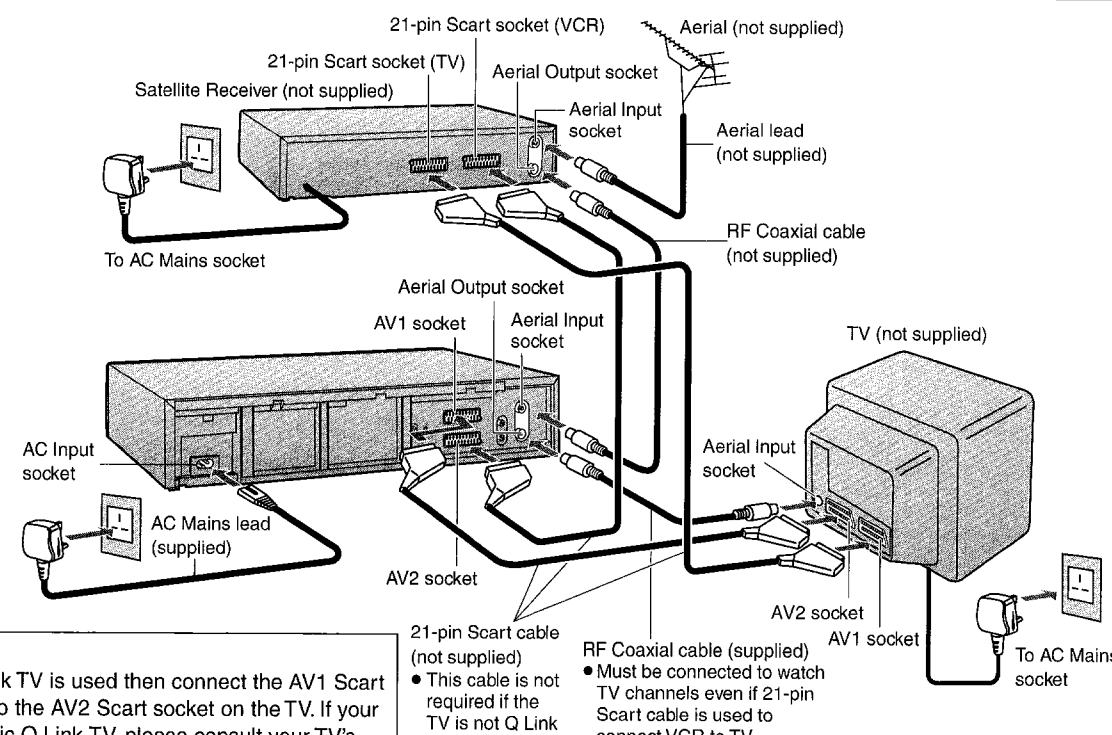
If you are connecting your VCR to a Satellite Receiver and a TV using only RF coaxial cables, then follow the steps below.



After completing the above connections, proceed to the Auto Setup page. (Page 7)
After completing the above connections, proceed to the Satellite Setting page. (Page15)

or Method 2.

If you are connecting your VCR to a Satellite Receiver and a TV using RF coaxial cables and 21-pin Scart cables, then follow the steps below.


21-pin Scart socket (VCR)
Aerial (not supplied)
21-pin Scart socket (TV)
Aerial Output socket
Satellite Receiver (not supplied)
Aerial Input socket
Aerial lead (not supplied)
RF Coaxial cable (not supplied)
To AC Mains socket
Aerial Output socket
AV1 socket
Aerial Input socket
TV (not supplied)
AC Input socket
Aerial Input socket
AC Mains lead (supplied)
AV2 socket
AV2 socket
AV1 socket
21-pin Scart cable (not supplied)
• This cable is not required if the TV is not Q Link type.
RF Coaxial cable (supplied)
• Must be connected to watch TV channels even if 21-pin Scart cable is used to connect VCR to TV.
To AC Mains socket

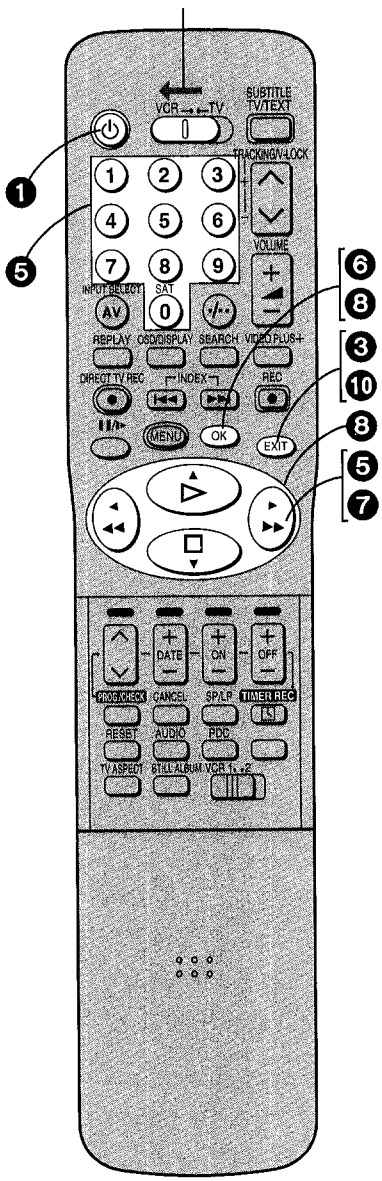
Note:
If a Panasonic Q Link TV is used then connect the AV1 Scart socket on the VCR to the AV2 Scart socket on the TV. If your TV is not a Panasonic Q Link TV, please consult your TV's operating instructions

After completing the above connections, proceed to the Auto Setup page (Page 7) for TV without Q Link, proceed to page 12 for Q Link type TV.
After completing the above connections, proceed to the Satellite Setting page. (Page 15)

Auto Setup (For TV without Q Link Functions)

Ensure that
- if a satellite receiver is also connect ensure that it is switched ON.
- set the satellite receiver to either "SKY ONE" or "SKY NEWS".

Set the VCR/TV switch to "VCR".



❶ Connect the VCR to an AC mains socket and turn it on.
- The VCR display flashes and after a few minutes, the VCR display stops flashing and displays the RF output channel number.

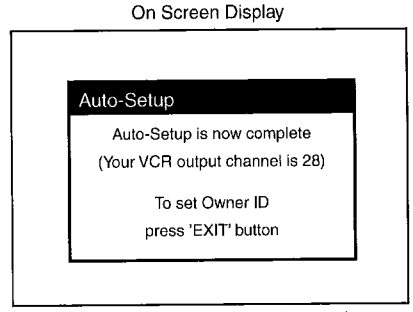
VCR Display

Indication when the VCR is switched on

Indication when the RF output channel is 28 (example)

❷ Select an unoccupied programme position on your TV and tune it to the RF output channel number determined in step ❶ above until the indication shown below is received clearly.
- If interference can be seen on the picture, you may need to change the RF output channel. To do this, follow the instructions on page 9.
- If your VCR is connected to your TV with a Scart cable (Q Link or auto-switching) then this screen will appear automatically and this step is optional.

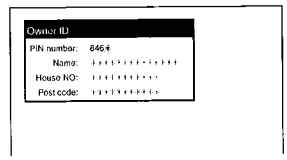
On Screen Display



Indication when Auto Setup is complete

❸ Press the EXIT button on the VCR remote control.

❹ The Owner ID menu appears. (You can enter the identification information now or do it later).



Owner ID indication

❺ Press the Cursor button (▶) and the Numeric buttons to enter a 4-digit PIN number.
- Be sure to remember this number.

❻ Press the OK button twice. The cursor moves to "Name".

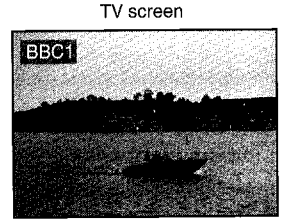
❼ Press the Cursor button (▶).

❽ Press the Cursor buttons (▲▼◀▶) to select a letter and then press the OK button. Repeat this to enter the name.

❾ Enter House No. and Postcode in the same way.

❿ **Press the EXIT button again if you don't want to set the Owner ID at this stage.**
- The picture of BBC 1 will appear. Your VCR is now ready for use.

TV screen



(continued on the next page)

Auto Setup Continued...

We advise that you check whether the stations have all been found in the correct order. This is important for Video Plus+ to work correctly. To display the list of tuned TV stations, see page 10.

Positions 5 and 6 may differ from the example shown.

If Channel 5 is received, it is usually found on programme position 5 and a connected satellite receiver on programme position 6.

If Channel 5 is not received but a satellite receiver is connected, then the satellite receiver is found on programme position 5.

Tuning

Pos	Name	Ch	Pos	Name	Ch
1	BBC1	22	11	-----	--
2	BBC2	23	12	-----	--
3	ITV	24	13	-----	--
4	CH4	25	14	-----	--
5	CH5	26	15	-----	--
6	SAT	33	16	-----	--
7	-----	--	17	-----	--

List of tuned TV stations (example)

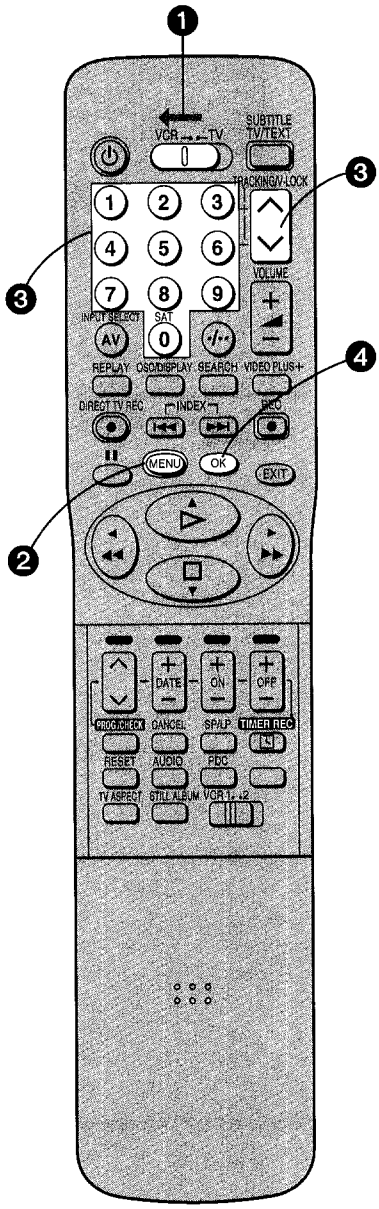
Hints:
If the clock setting menu appears after Auto Setup has finished, this indicates that the VCR was not able to set the clock automatically. Follow the operation guide on the On Screen Display to set the clock manually. (See page 71.)

To Display the Owner ID setting menu
Keep the EJECT button pressed for more than 5 seconds.
- However, the PIN number is not displayed.
- After 30 seconds, this menu automatically disappears.

Removing Interference

TV screen

The picture with interference



In some cases, interference (lines or patterning) may be seen on the TV when playing back a video cassette. If this happens, follow the steps below to change the video playback channel (RF output channel) to remove the interference.

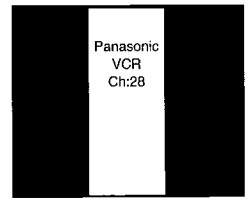
❶ Set the VCR/TV switch to "VCR".

❷ Press the MENU button for more than 5 seconds. The RF output channel number is displayed on the VCR display.

VCR display

Indication when the RF output channel is 28 (example)

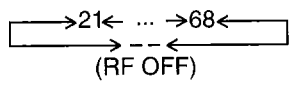
On Screen Display



Test pattern indication

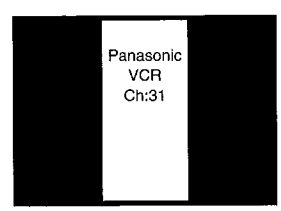
❸ Press the numeric buttons or use the Channel button (∨) or (∧) to select a channel number which differs by 2 or 3 from the automatically set channel number. (For example, if the original channel number was 28, enter 31.)

- Set the RF output channel of the VCR to "––" (RF OFF) when the VCR is connected to the TV via the 21-pin Scart cable.
  Press the "0" numeric button or Channel button (∨) or (∧) to display "––".

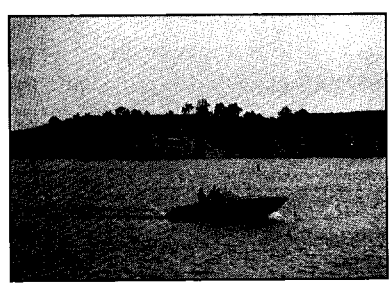


Indication after changing the RF output channel to 31 (example)

❹ Retune your TV until you receive the Test pattern indication. Press the OK button to conclude the setting.

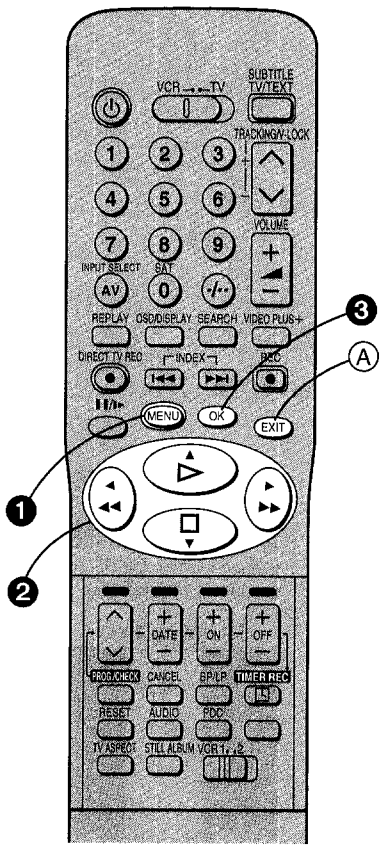


Test pattern indication



The clear picture

Checking the Settings for Auto Setup



To Confirm that the TV Stations Have Been Tuned Correctly by the Auto Setup Function

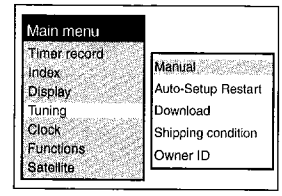
❶ Press the MENU button to display the OSD Main menu on the TV screen.

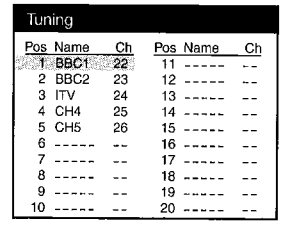
❷ Press the Cursor buttons (▲▼◄►) to select "Tuning" and then "Manual".

❸ Press the OK button to display the list of tuned TV stations and confirm that all available TV stations have been set correctly.

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

On Screen Display





List of tuned TV stations (example)

Hint:
When the station names and/or channel numbers have not been set correctly:

① Press the MENU button to display the OSD Main menu.
② Press the Cursor buttons (▲▼◄►) to select "Tuning", and then "Manual".
③ Press the OK button to display the list of tuned TV stations.
④ Press the Cursor buttons (▲▼◄►) to select the programme position whose station name and/or channel number you want to change.
⑤ Press the OK button to display the Manual Tuning menu.
⑥ Press the Cursor buttons (▲▼◄►) to enter the correct station name and channel number.
⑦ Press the OK button to conclude the setting.
⑧ Press the MENU button.
⑨ Press the EXIT button to exit the On Screen Display.

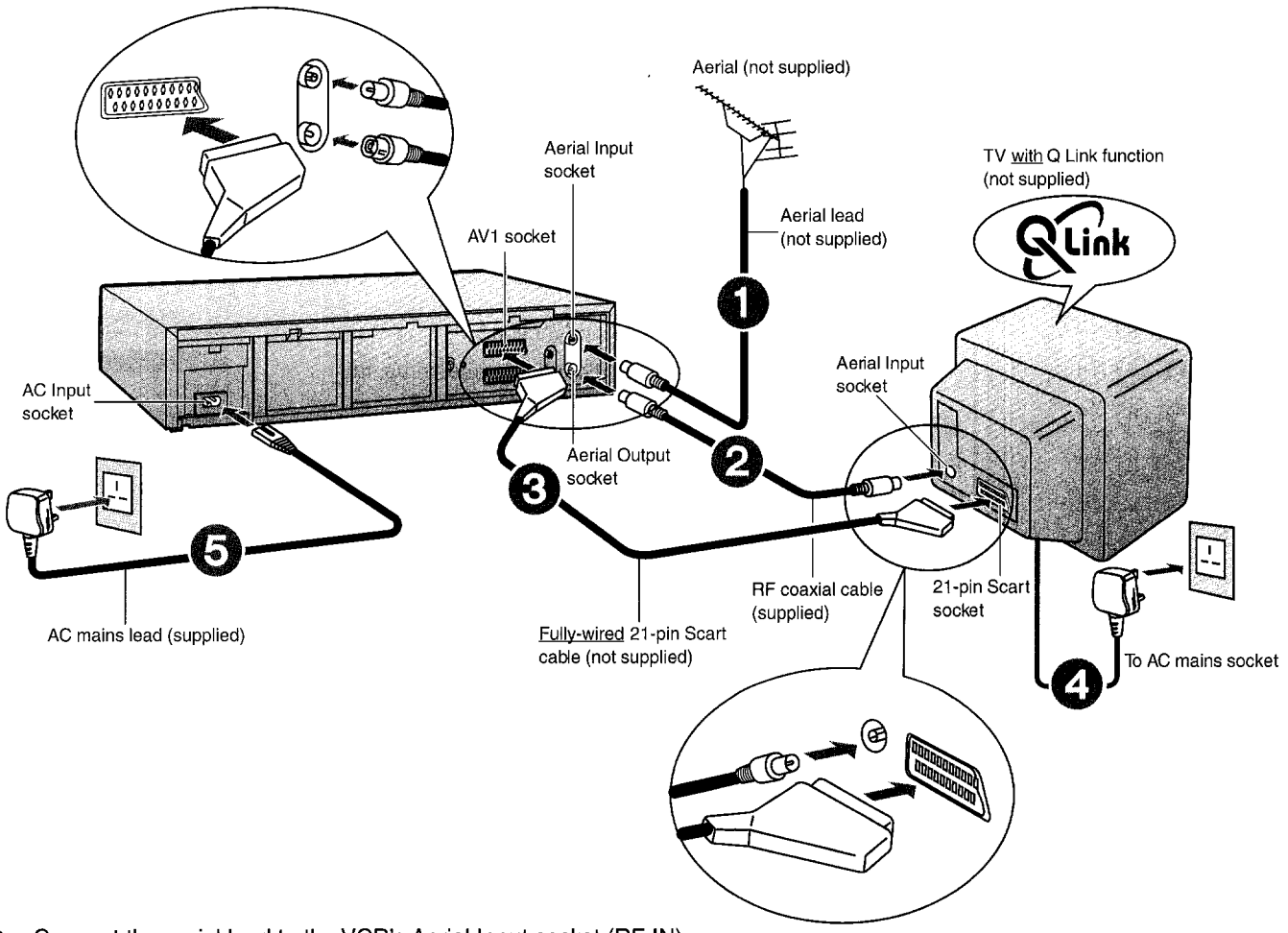
See page 62.

Connections and Preparations for a TV Equipped with the Q Link Function

Connections and preparations for a TV equipped with the Q Link*1 function and equipped with a 21-pin Scart socket. For the connections and preparations for a TV equipped with the "DATA LOGIC*2", "Easy Link*3", "Megalogic*4" or "SMARTLINK*5" function and with a 21-pin Scart socket, also read from this page.

For details about the connections, also read TV's operating instructions.

Be sure to keep both the TV and VCR switched off until all connections have been made.
For your safety, be sure not to connect or handle the equipment with wet hands.



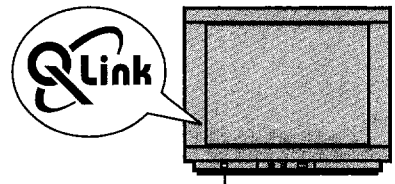
1. Connect the aerial lead to the VCR's Aerial Input socket (RF IN).
2. Connect the supplied RF coaxial cable to the VCR's Aerial Output socket (RF OUT) and to the TV's Aerial Input socket.
3. Connect a fully-wired 21-pin Scart cable (not supplied) to the VCR's AV1 socket and to the TV's 21-pin Scart socket.
4. Connect the TV to an AC mains socket.
5. Connect the VCR to an AC mains socket.

The basic connections are now complete. Proceed to the next page.

Hints:

- Q Link is an advanced system that offers a range of convenient functions such as automatic copying of the tuning position of all available TV stations (in the same order as they are programmed on the TV) into your VCR's memory (this is called Download) if you connect the VCR to your TV with a fully-wired 21-pin Scart cable (not supplied). Depending on the manufacturer, the equivalent of the Q Link function has a different name and may not work exactly the same.
  *1"Q Link" is a registered trademark of Panasonic.
  *2"DATA LOGIC" is a registered trademark of Metz.
  *3"Easy Link" is a registered trademark of Philips.
  *4"Megalogic" is a registered trademark of Grundig.
  *5"SMARTLINK" is a registered trademark of Sony.
  For details, refer to your TV's operating instructions or consult your dealer.
- Unlike in most commercially sold 21-pin Scart cables, in fully-wired 21-pin Scart cables all 21 pins of one plug are connected to the matching pin of the plug on the other end of the cable. This type of cable is necessary for the Preset Download function to work.

Connections and Preparations for a TV Equipped with the Q Link Function Continued...



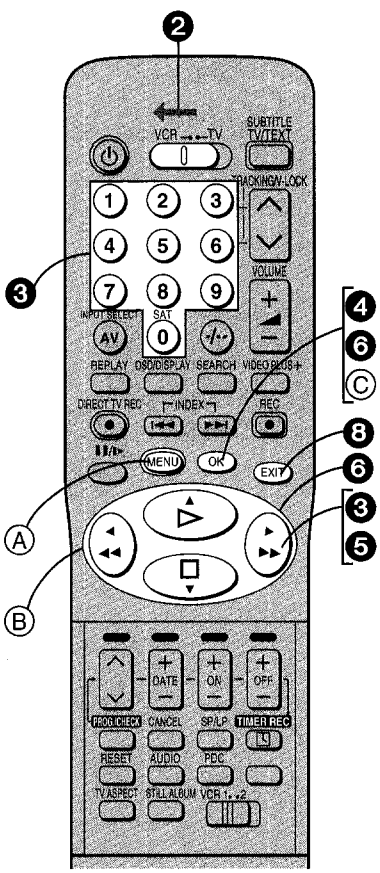
❶ TV with Q Link function

Automatically Copying the Tuning Position of All Available TV Stations in the Same Order from the TV on to the VCR

(Preset Download Function)

The Preset Download function automatically copies the tuning position of all available TV stations into the VCR's memory when you connect the VCR using a fully-wired 21-pin Scart cable to a TV equipped with the Q Link function.

A-1 To simultaneously set up this VCR with a new TV, follow the operation steps explained below.
A-2 To set up this VCR with a TV already in use, follow the operation steps explained on the next page.



A-1 To Simultaneously Set Up this VCR with a New TV

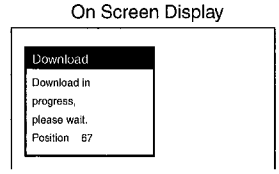
If you have purchased the VCR and the TV at the same time, perform the following operations:
Perform the following operation steps exactly as described to ensure that the Preset Download function works correctly.

◆ First of all, make sure that the VCR is switched off.

❶ Switch the TV on.
The TV starts to tune all available TV stations and to adjust the clock.
(This is called Auto Setup function.)

◆ When the TV has finished its own auto setup, the VCR is automatically switched on, and the downloading of the setup data from the TV to the VCR starts.

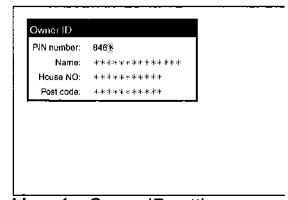
On Screen Display



Indication during downloading

❷ Set the VCR/TV switch to "VCR".

❸ When Download has finished, the screen for the Owner ID setting menu appears. Press the Cursor button (▶) and the Numeric buttons to enter a 4-digit PIN number.
• Be sure to remember this number.



Menu for Owner ID setting

❹ Press the OK button twice. The cursor moves to "Name".

❺ Press the Cursor button (▶).

❻ Press the Cursor buttons (▲▼◀▶) to select a letter and then press the OK button. Repeat this to enter the name.

❼ Enter House No. and Postcode in the same way.

❽ Press the EXIT button to make the On Screen Display disappear.

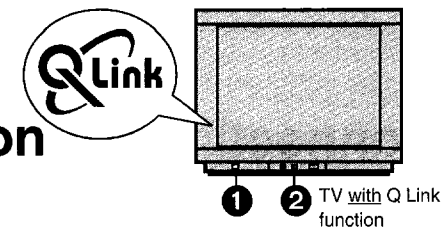
To Display the Owner ID setting menu
Keep the EJECT button pressed for more than 5 seconds.
• However, the PIN number is not displayed.
• After 30 seconds, this menu automatically disappears.

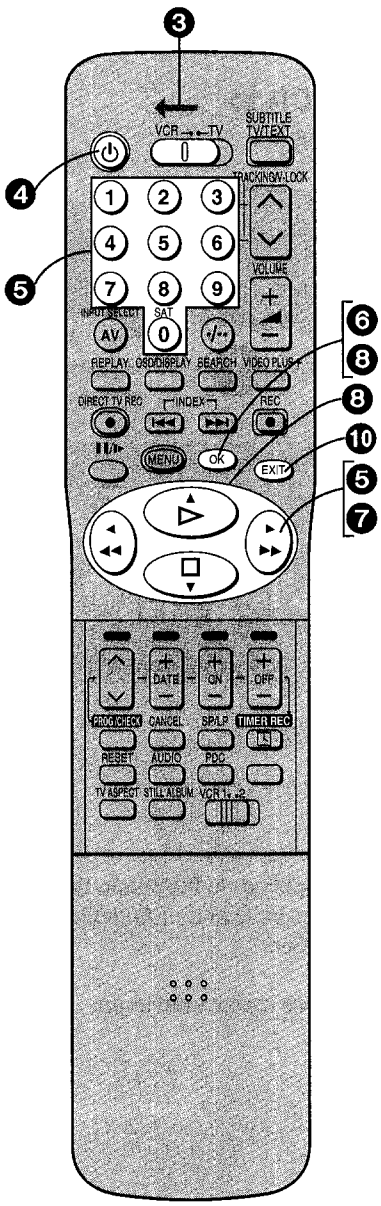
Note:
In the operation A-1, if you accidentally switch on the VCR before the TV, downloading of the setup data from the TV may not be performed correctly. In this case, follow the operation steps below.

① Wait until the Auto Setup is complete on both the TV and the VCR.
② Press the MENU button Ⓐ to display the OSD Main menu on the TV screen.
③ Press the Cursor buttons (▲▼◀▶) Ⓑ to select "Tuning" and then "Download".
④ Press the OK button Ⓒ twice. Downloading of the setup data from the TV to the VCR starts.
⑤ When the programme position "1" and the current time appear in the VCR display, downloading is complete.

Hint:
If you use a Panasonic TV and perform the operation step ❶ above, starting the downloading of the setup data will automatically display the Download indication. However, in case of a TV of another make, the Download indication may not appear. In this case, select the AV input on your TV if you want to see the Download indication.

Connections and Preparations for a TV Equipped with the Q Link Function Continued...





A-2 To Set Up this VCR with a TV Already in Use

❶ Switch the TV on.

❷ Select the AV input on your TV.

❸ Set the VCR/TV switch to "VCR".

❹ Press the VCR ON/OFF button (⏻) to switch the VCR on. Downloading of the setup data starts automatically.

❺ When Download has finished, the Owner ID setting menu appears. Press the Cursor button (▶) and the Numeric buttons to enter a 4-digit PIN number.
- Be sure to remember this number.

❻ Press the OK button twice. The cursor moves to "Name".

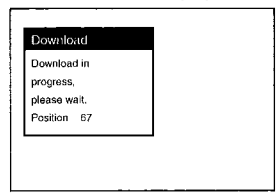
❼ Press the Cursor button (▶).

❽ Press the Cursor buttons (▲▼◀▶) to select a letter and then press the OK button. Repeat this to enter the name.

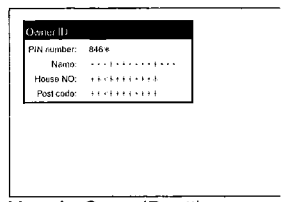
❾ Enter House No. and Postcode in the same way.

❿ Press the EXIT button to make the On Screen Display disappear.

On Screen Display



Indication during downloading



Menu for Owner ID setting

To Display the Owner ID setting menu
Keep the EJECT button pressed for more than 5 seconds.
- However, the PIN number is not displayed.
- After 30 seconds, this menu automatically disappears.

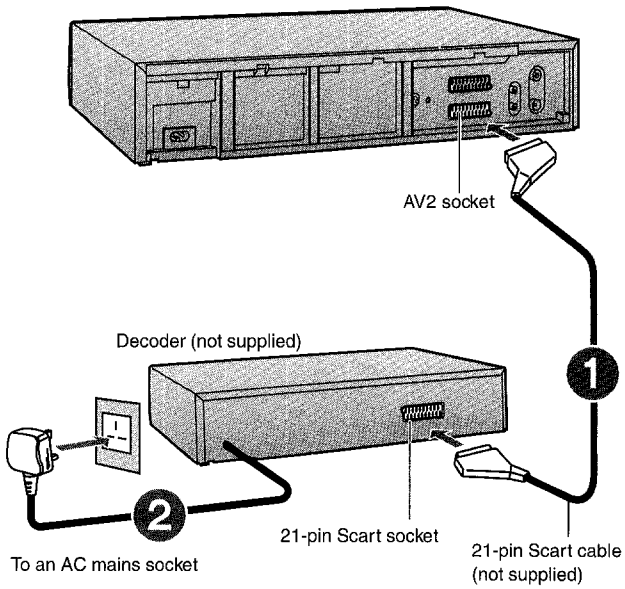
Connecting the VCR to a Decoder/ Connecting the VCR to a Stereo Amplifier

To connect this VCR to a decoder or a stereo amplifier, make the connections shown in the illustration below.
For the connection to the TV, see page 5 or 11.

For details about the connection, also read the operating instructions of the decoder or stereo amplifier.

Be sure to keep the VCR, TV and decoder or stereo amplifier switched off until you have finished all connections.
For your safety, do not connect or handle the equipment with wet hands.

To Connect the VCR to a Decoder

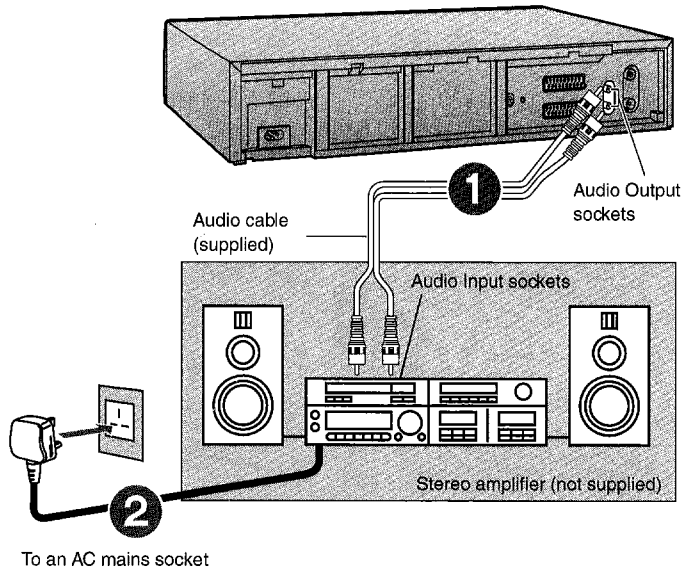


❶ Connect a 21-pin Scart cable (not supplied) to the AV2 21-pin Scart socket [AV2 (DECODER/EXT)] on the VCR and to the 21-pin Scart socket on the decoder.

❷ Connect the decoder's mains lead to an AC mains socket.

❸ Set "AV2" to "DECODER".
For details, see below.

To Connect the VCR to a Stereo Amplifier



❶ Connect an Audio cable (supplied) to the Audio Output sockets (AUDIO OUT) on the VCR and to Audio Input sockets on the stereo amplifier.

❷ Connect the stereo amplifier's mains lead to an AC mains socket.

Note:
After connecting the decoder to the AV2 21-pin Scart socket [AV2 (DECODER/EXT)] on this VCR, you need to change the setting for "AV2" to "DECODER". Follow the operations below:

① Press the MENU button to display the Main menu on the TV screen.
② Press the Cursor buttons (▲▼◀▶) to select "Functions", "AV2", and "VCR/SAT" in this order.
③ Press the Cursor buttons (▲▼) to set to "DECODER".
④ Press the OK button to conclude the setting.
⑤ Press the EXIT button to make the On Screen Display disappear.

Hint:
"RGB" means separate Red/Green/Blue colour signals. If you connect a TV equipped with RGB input capability to the AV1 socket on this VCR, and a decoder equipped with RGB output capability to the AV2 socket, the TV can receive RGB signal input from the decoder via the VCR.

Setting after connecting the VCR to a Satellite Receiver

The connection method differs depending on the type of your satellite receiver.

A If the satellite receiver is not equipped with a 21-pin Scart socket, make the connections as explained on page 6 (Method 1).

B If the satellite receiver is equipped with a 21-pin Scart socket, make the connections as explained on page 6 (Method 2).

For details about the connection, also read the satellite receiver's operating instructions.

A Connecting the Satellite Receiver is Not Equipped with a 21-pin Scart Socket

After completing the connection, proceed to the Satellite Setting on pages 16 –19.

B Connecting the Satellite Receiver is Equipped with a 21-pin Scart Socket

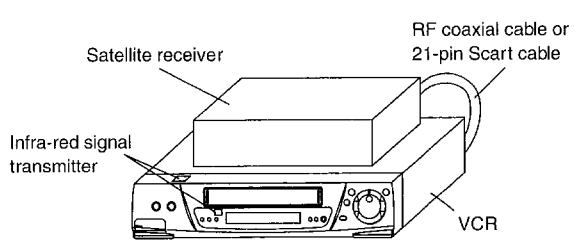
When you connect the satellite receiver to AV2 21-pin Scart socket [AV2 (DECODER/EXT)] on this VCR, you need to change the setting for "AV2" to "VCR/SAT".
Follow the operations below.

① Press the MENU button to display the Main menu on the TV screen.
② Press the Cursor buttons (▲▼◀▶) to select "Functions", "AV2", and "DECODER" in this order.
③ Press the Cursor buttons (▲▼) to set to "VCR/SAT".
④ Press the OK button to conclude the setting.
⑤ Press the EXIT button to make the On Screen Display disappear.

After this setting, proceed to the Satellite Setting on pages 17–19.

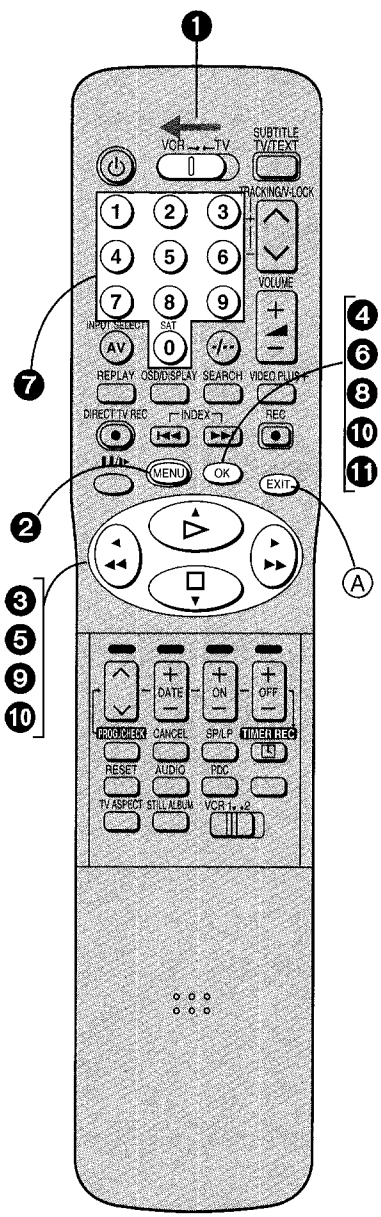
Notes:

- **How to install the satellite receiver**
  Carefully observe the following points so that you can control the satellite receiver from the VCR.
  ① Place the satellite receiver on top of the VCR.
  ② Move the satellite receiver back a few centimetres so that infra-red signals emitted from the top of the VCR's front panel can be received by the satellite receiver.
- When you want to record a subtitled TV programme with the subtitles, be sure to select the correct setting for "Subtitles" on the menu before recording. (See page 66.)



- When VCR is connected to the satellite receiver with an RF coaxial cable (without 21-pin Scart cable), the RF output channel of the receiver should be adjusted away from the RF output channel of the VCR, which may be used by the VCR during Auto Setup, to avoid interference on VCR picture. (Refer to your satellite receiver's instruction book.) Also select "SKY ONE" or "SKY NEWS" on the satellite receiver to ensure reliable tuning before starting the Auto Setup.
- When you want to record a subtitled satellite TV programme with its subtitles, be sure to select the correct subtitle Teletext page number for that satellite TV station before recording. (See page 66.)

Setting after Connecting the VCR to a Satellite Receiver Continued...



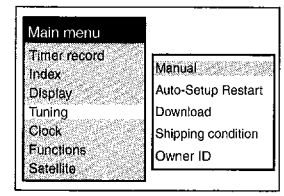
Entering Satellite Channels on the VCR (Satellite tuning)

If you have connected the satellite receiver to the VCR with the RF coaxial cable (without 21-pin Scart cable), you need to tune the VCR to the satellite TV stations. Follow the operations below.

These setting are not necessary when the 21-pin Scart cable has been used for the connection. (In this case, proceed to pages 17–19.)

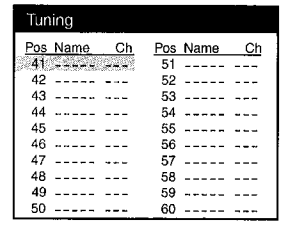
❶ Set the VCR/TV switch to "VCR".

❷ Press the MENU button to display the Main menu on the TV screen.



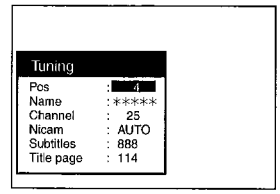
❸ Press the Cursor buttons (▲▼◀▶) to select "Tuning" and "Manual" in this order.

❹ Press the OK button to display the list of tuned TV stations.



❺ Press the Cursor buttons (▲▼◀▶) to select an unoccupied programme position or a programme position that is already tuned to a satellite TV station.

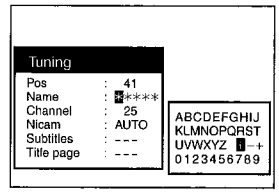
❻ Press the OK button to display the Tuning menu.



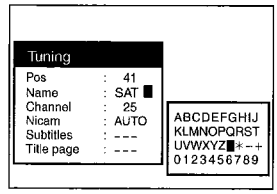
❼ Press the Numeric buttons to enter the number of the channel of the desired satellite TV station.
If the number is already entered, performing this operation and step ❽ is not necessary.

❽ Press the OK button to conclude the setting.

❾ Press the Cursor buttons (▲▼◀▶) to select "Name" and then press the Cursor button (▶) to move to the right.



❿ Press the Cursor buttons (▲▼◀▶) and the OK button to enter "SAT␣␣".
- "␣␣" indicates two blank spaces.
  Enter the blank space between "Z" and "∗" in the list of characters twice.
- If "SAT␣␣" is already entered, this operation is not necessary.

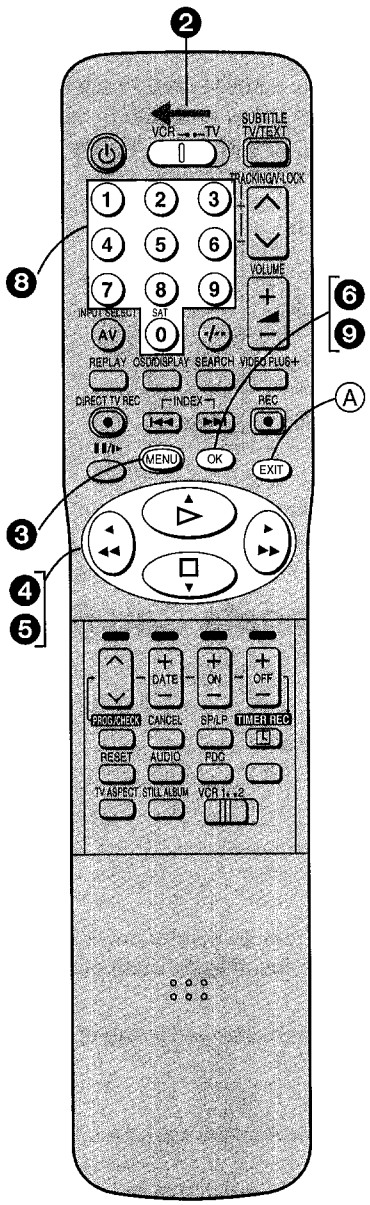


⓫ Press the OK button to conclude the setting.

To exit the On Screen Display:
Press the EXIT button Ⓐ.

Hints:
- If your TV is equipped with the Q Link function and you have performed Download, change the names of the channels on which you receive satellite TV stations on the TV to "SAT␣␣" instead of performing the operations explained on this page (also read the operating instructions of the TV). After performing this step, Download is performed again automatically, and the names of the satellite channels on the VCR are also changed to "SAT␣␣".
- "SAT␣␣" is a special term. Enter it only when a satellite receiver is connected.

Setting after Connecting the VCR to a Satellite Receiver Continued...



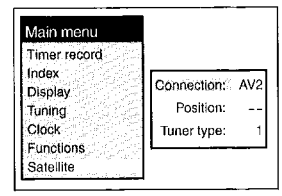
To Prepare the VCR for Remote-controlled Operation of the Satellite Receiver (Setting the Tuner Type)

This VCR lets you change the programme position on the satellite receiver and programme timer recordings of satellite programmes — all with this VCR's remote control. This is called "satellite control".
To enable the VCR to control the satellite receiver, you need to set the tuner type of your satellite receiver. You can find the tuner type numbers on the enclosed list of compatible satellite receivers. However, if your satellite receiver is not included in this list, it cannot be remote-controlled via this VCR.

❶ Display the VCR picture on the TV.

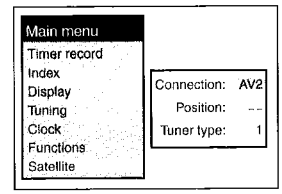
❷ Set the VCR/TV switch to "VCR".

❸ Press the MENU button to display the Main menu on the TV screen.



❹ Press the Cursor buttons (▲▼◀▶) to select "Satellite", "Connection" and "NO" in this order.

❺ Press the Cursor buttons (▲▼) to select the type of connection according to the type of socket on the VCR to which the satellite receiver is connected.



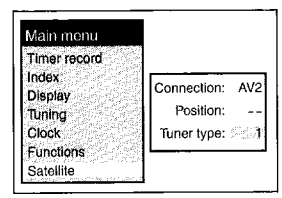
NO: When the satellite receiver is not connected to the VCR
RF: When the satellite receiver is connected to the VCR's Radio Frequency Input socket (RF IN) without 21-pin Scart cable
AV1: When the satellite receiver is connected to the VCR's AV1 21-pin Scart socket [AV1 (TV)]
AV2: When the satellite receiver is connected to the VCR's AV2 21-pin Scart socket [AV2 (DECODER/EXT)]

❻ Press the OK button.

❼ Press the Cursor buttons (▲▼◀▶) to select "Tuner type" and "1" in this order.

❽ Find your receiver in the enclosed list of compatible satellite receivers and enter its tuner type number by pressing the Numeric buttons.

❾ Press the OK button to conclude the setting.



To exit the On Screen Display:
Press the EXIT button Ⓐ.

Hint:
If you select "RF" in step ❺ above, "Satellite - Position" is set automatically and it is not possible to change the satellite programme position here. If you want to change it, refer to page 62.
Note:
If your satellite receiver is not included in the enclosed list of compatible satellite receivers, this VCR cannot control it.

Setting after Connecting the VCR to a Satellite Receiver Continued...

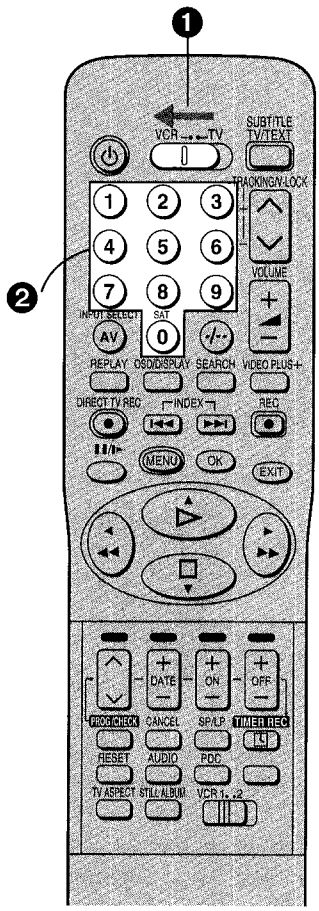
To Prepare the Satellite Receiver

To make it possible for the VCR to control the satellite receiver, the satellite receiver must be left in a certain condition. This condition is called standby type, and it differs depending on the make and model of satellite receiver. There are five standby types (A, B, C, D, E) as listed below.
Find your satellite receiver in the enclosed list of compatible satellite receivers and note its standby type. Then look up this standby type in the chart below and determine which action(s) you need to take to prepare your satellite receiver so that this VCR can control it.

Action \ Standby Type	A	B	C	D	E
①	Yes	No	Yes	Yes	Yes
②	No	No	No	Yes	Yes
③	No	No	Yes	No	Yes

Action ①: Switch the satellite receiver on.
Action ②: Twin-tuner type satellite receiver: Select on the tuner which is connected to the VCR. (Please also refer to the satellite receiver's operating instructions.)
Action ③: Switch the satellite receiver's channel display to the 2-digit display mode.

To Check that the Satellite Channels Can Be Selected Correctly



❶ Set the VCR/TV switch to "VCR".

❷ Press the Numeric buttons to select the satellite channel.

Example:
To select "SAT 9": Enter SAT 0 → SAT 0 → 9 .
To select "SAT 19": Enter SAT 0 → 1 → 9 .
To select "SAT 129": Enter SAT 0 → 1 → 2 → 9
3-digit programme positions can be selected with this remote control only in case of a satellite receiver that is marked with (*1) on the enclosed list of compatible satellite receivers.

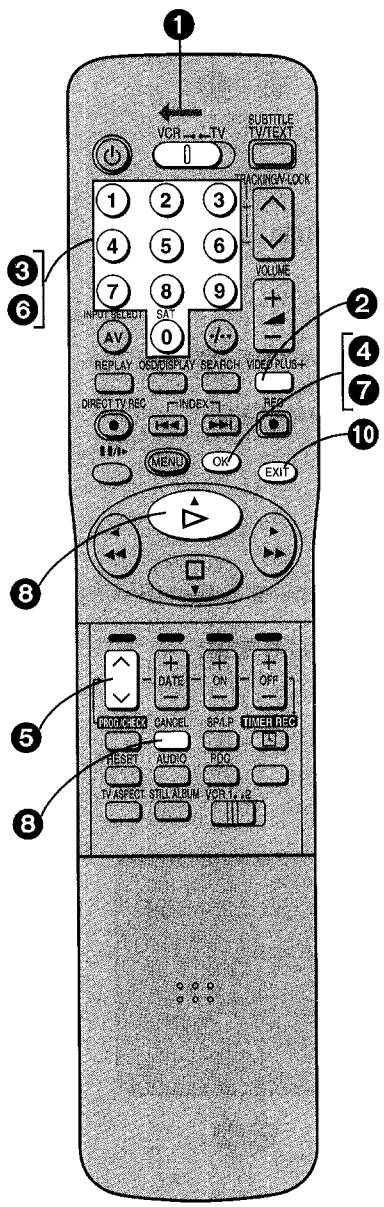
❸ Check that the channel on the satellite receiver has been changed to the channel that you selected.

Notes:

- After you have finished all settings and preparations, use the VCR's remote control to check that the satellite programmes can be selected correctly and timer recordings of satellite broadcast can be performed correctly.
- With some satellite receivers, correct control from the VCR may not be possible.
- There may be a slight delay between pressing the Numeric buttons on the remote control and the changing of the channel on the satellite receiver. This is due to the need for signal conversion.
- Some satellite receivers offer more than 99 satellite channels, but even in this case, only the satellite channels 1 through 99 can be controlled from the VCR. However, depending on your satellite receiver, it may also be possible to control 3-digit programme positions. (See the enclosed list of compatible satellite receivers.)
- Some satellite receivers offer less than 99 channels. In this case, the number of the satellite channels that can be controlled from the VCR is the same.
- With some satellite receivers, it is necessary to wait a few seconds between selecting one channel and selecting another one with the remote control of the VCR.
- If the display on the satellite receiver does not indicate the channels, refer to its operating instructions and follow the procedure for displaying the channels.

Video Plus+ PlusCodes for a Satellite Receiver (If Connected)

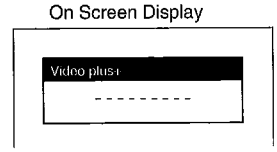
To enable your VCR to recognize Video Plus+ PlusCodes for each satellite station, you need to follow the instructions below. It is important that you do this before trying to make a timer recording using Video Plus+ PlusCode for any satellite programme. This involves setting some dummy timer recordings from Video Plus+ PlusCodes then deleting them afterwards.



❶ Set the VCR/TV switch to "VCR".

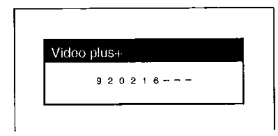
❷ Press the VIDEO PLUS+ button.

On Screen Display



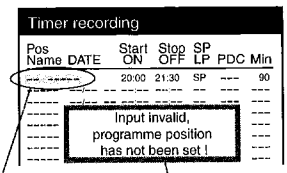
Menu for entering the PlusCode

❸ Enter a PlusCode from a Satellite Programme Guide for a station, e.g. Sky 1 using the Numeric buttons.



Indication when the PlusCode is entered

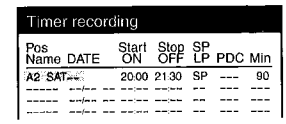
❹ Press the OK button.
You will see the warning message on the screen for the first few seconds telling you that the position number has not been set.
• "––" appears for the programme position



"––" indication

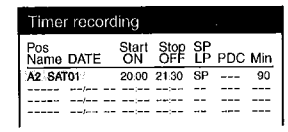
Waming message

❺ Press the Channel button (∨) or (∧) until the SAT name appears in the name column on the screen. You can select the AV position if you have connected your satellite receiver to your VCR with a scart cable.



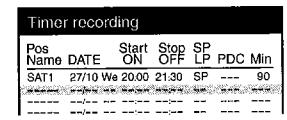
Indication when SAT name is selected

❻ Press the Numeric buttons to enter the satellite channel.



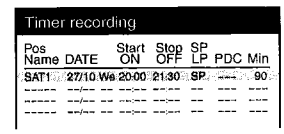
Indication when SAT channel is set

❼ Press the OK button again to conclude the setting.



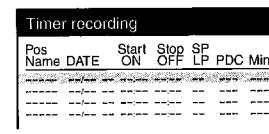
Indication when the settings are concluded

❽ Press the Cursor buttons (▲) and then the CANCEL button to delete the programming.



Menu when the programme to cancel is selected

❾ Repeat steps ❷ to ❽ above for another satellite station. Continue with this until you have set and deleted a dummy timer recording for each satellite station that you will make Video Plus+ recording from.

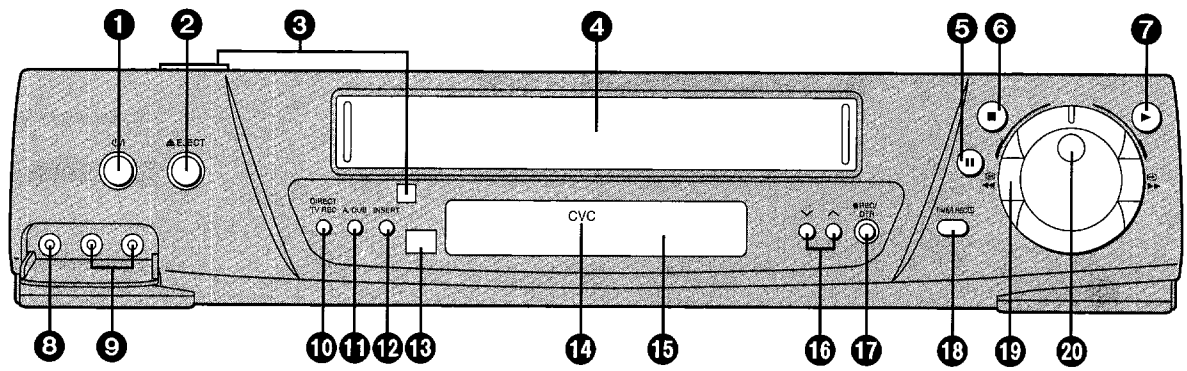


Menu after the programming has been cancelled

❿ Press the EXIT button to exit the On Screen Display.

Your VCR is now able to recognize Video Plus+ PlusCodes for the satellite stations, ready for when you come to use them.

Controls and Layout of the VCR



❶ VCR-ON/OFF button (⏻/I)

❷ Cassette Eject button (EJECT)

❸ Infra-red Signal transmitter

❹ Cassette compartment

❺ Pause/Still button (❚❚)

❻ Stop button (■)

❼ Play button (▶)

❽ Video Input socket [VIDEO IN (AV3)]

❾ Audio Input sockets [AUDIO IN (AV3)]

❿ Direct TV Recording button (DIRECT TV REC)

⓫ Audio Dubbing button (A.DUB)

⓬ Insert Edit button (INSERT)

⓭ Infra-red Remote Control Receiver window

⓮ Crystal View Control indicator (CVC)

⓯ VCR display

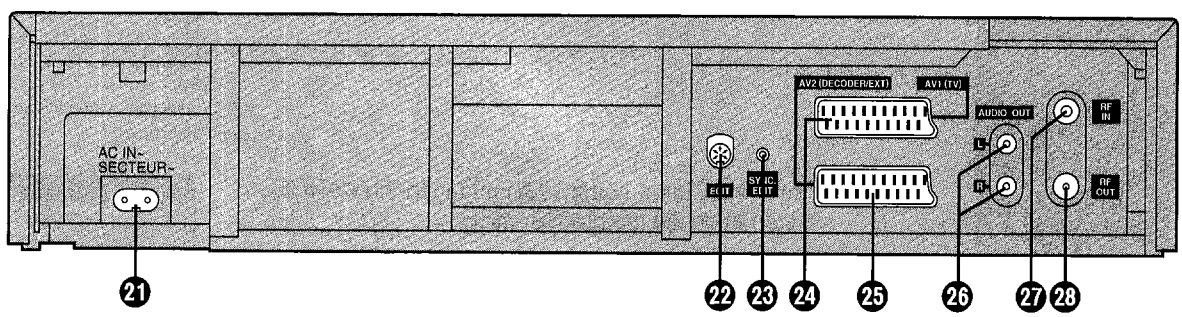
⓰ Channel buttons (∨∧)

⓱ Recording/One-Touch Recording button (REC/OTR)

⓲ Timer Recording button (TIMER REC)

⓳ Shuttle Ring

⓴ Jog Dial



㉑ AC Input socket (AC IN ~)

㉒ Edit socket (EDIT)

㉓ Synchronized Edit socket (SYNC.EDIT)

㉔ AV1 21-pin Scart socket [AV1 (TV)]

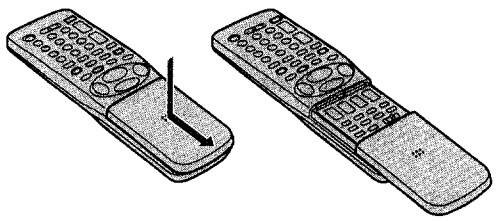
㉕ AV2 21-pin Scart socket [AV2 (DECODER/EXT)]

㉖ Audio Output sockets (AUDIO OUT)

㉗ K Aerial Input socket (RF IN)

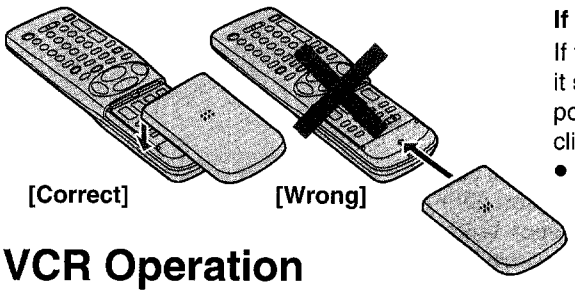
㉘ Aerial Output socket (RF OUT)

Controls and Layout of the Remote Control



To Open the Sliding Cover of the Remote Control:

Slide the cover downward while pressing down on the protruding parts.



[Correct] [Wrong]

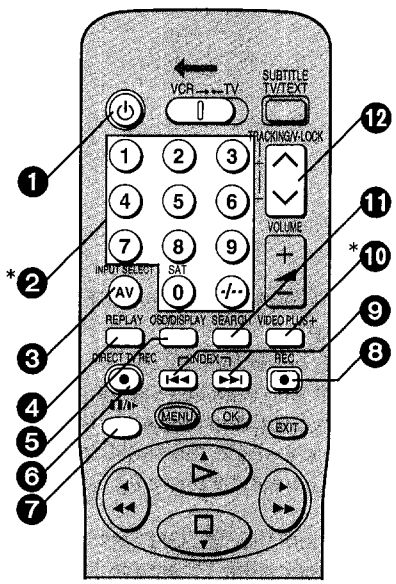
If the Sliding Cover of the Remote Control Becomes Detached

If the sliding cover of the remote control becomes detached accidentally, fit it securely in place by placing it on the top of the remote control at the position shown in the illustration on the left, and pushing it down until it clicks into position.

- It is not possible to fit the sliding cover in place by pushing or sliding it on from the bottom end of the remote control.

VCR Operation

When you want to operate the VCR, set the VCR/TV switch to "VCR".
Controls marked with an asterisk (*) are further explained at the bottom of the page.



❶ **VCR-ON/OFF button (⏻)**

*❷ **Numeric buttons**

❸ **Input Select button (INPUT SELECT)**

❹ **Replay button (REPLAY)**

❺ **On Screen Display/Display button (OSD/DISPLAY)**

❻ **Direct TV Recording button (DIRECT TV REC)**

❼ **Pause/Slow button (❚❚/►)**

❽ **Recording button (REC)**

❾ **Index buttons (INDEX)**

*❿ **Video Plus+ Programming button (VIDEO PLUS+)**

⓫ **Search button (SEARCH)**

⓬ **Channel button (∨∧)**
Tracking/Vertical-Lock button (TRACKING/V-LOCK)

Hints:

***❷Numeric buttons**

To select the programme positions (1-99) of the VCR.

Example:

9: ⑨

19: -/-- → ① → ⑨

To select the satellite programme positions.

Example:

SAT 9: SAT 0 → SAT 0 → ⑨

SAT19: SAT 0 → ① → ⑨

SAT129: SAT 0 → ① → ② → ⑨

3-digit programme positions can be selected with this remote control only in case of a satellite receiver that is marked with (*1) on the enclosed list of compatible satellite receivers.

To enter a Video Plus+ PlusCode.

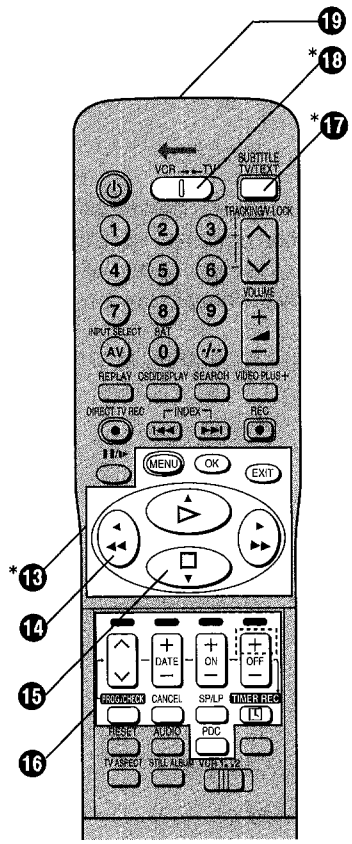
To enter numbers for various settings.

***❿Video Plus+ Programming button (VIDEO PLUS+)**

Use this button when you want to programme timer recordings using the Video Plus+ PlusCodes. For this convenient programming method, you use the individual numbers which are assigned to each TV programme and listed in newspapers and magazines.

Controls and Layout of the Remote Control Continued...

Controls marked with an asterisk (*) are further explained at the bottom of the page.



***⑬ On Screen Display Menu Operation buttons**
- **Menu button (MENU)**
- **OK button (OK)**
- **Exit button (EXIT)**
- **Cursor buttons (▲▼◀▶)**

⑭ Rewind button (◀◀)

⑮ Stop button (□)

⑯ Timer Recording Operation buttons
- **Channel button (∨∧)**
- **Date button (DATE)**
- **Starting Time button (ON)**
- **Ending Time button (OFF)**
- **Programme/Check button (PROG./CHECK)**
- **Cancel button (CANCEL)**
- **Standard Play/Long Play button (SP/LP)**
- **Timer Recording button (TIMER REC)**
- **Programme Delivery Control button (PDC)**

***⑰ Subtitle button (SUBTITLE)**

***⑱ VCR/TV switch**

⑲ Infra-red transmitter

Hints:

***⑬ On Screen Display Menu Operation buttons**

You can display menus with the timer programmings and operations for timer recording as well as other settings on the TV screen and operate them on the TV screen using the following buttons:

Menu button (MENU): To display the OSD Main menu on the TV screen.
To return to the previous menu.

OK button (OK): To confirm and accept the settings.

Exit button (EXIT): To exit the OSD.

Cursor buttons (▲▼◀▶):
To select an item.
These buttons also function for playback, stop, rewinding and fast-forwarding.

***⑰ Subtitle button (SUBTITLE)**

When receiving or playing back recordings of TV programmes that are broadcast with subtitles via Teletext, and also when playing back pre-recorded cassettes with "Closed Caption" subtitles, you can make the subtitles appear or disappear on the TV screen by pressing this button.

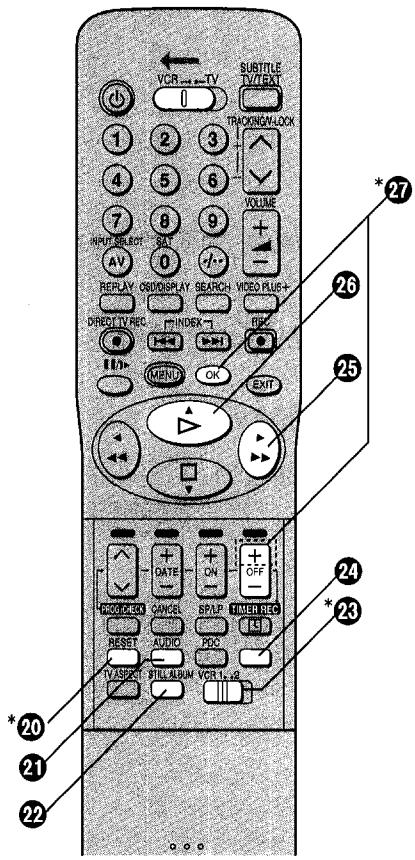
- Every time you press this button, the "㊂: ON" indication or "㊂: OFF" indication appears on the TV screen for a few seconds. When you press this button to display the "㊂: ON" indication, the subtitles are displayed on the TV screen.
- After pressing this button so that the "㊂: ON" indication appears, it may take a few moments until the subtitles are displayed on the TV screen.
- Pressing this button also changes the setting of "Subtitles" for "Display" on the Main menu accordingly. Therefore, turning the subtitle function on or off is also possible by changing the above setting on the Main menu. (See page 74.)

***⑱ VCR/TV switch**

If you set this switch to TV, you can use this remote control to turn your TV on or off, select TV/AV Input, and operate other TV functions. (See page 24.)
When you want to operate the VCR, set this switch to "VCR". The initial setting is "VCR".

Controls and Layout of the Remote Control Continued...

Controls marked with an asterisk (*) are further explained at the bottom of the page.



*⑳ **Tape Counter Reset button (RESET)**

㉑ **Audio button (AUDIO)**

㉒ **Still Album button (STILL ALBUM)**

*㉓ **VCR 1/2 Select switch (VCR1/2)**

㉔ This button do not operate any function on this VCR.

㉕ **Fast Forward button (▶▶)**

㉖ **Play button (▷)**

*㉗ **Child Lock Function buttons**

Hints:

***⑳Tape Counter Reset button (RESET)**

To reset the tape counter (elapsed time) to "0:00.00".

- The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

***㉓VCR1/2 Select Switch (VCR1/2)**

Set to the "VCR2" position when using two Panasonic VCRs. (See page 76.)

***㉗ Child Lock Function buttons**

(Convenient function to prevent unauthorized use)

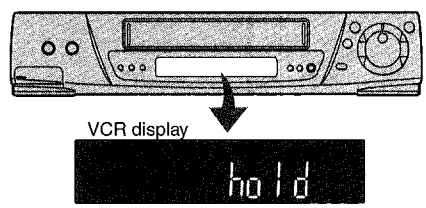
This function deactivates all buttons on the VCR and the remote control. Use this function, when you do not want other people to operate the VCR.

To Activate the Child Lock Function:

① Set the VCR/TV switch to "VCR".

② Hold down the OK and the OFF (+) buttons simultaneously until the "hold" indication appears in the VCR display.

- If you press a button while the Child Lock function is on, the "hold" indication appears in the VCR display to inform you that no operation is possible.



Indication when the Child Lock function is activated

To Cancel the Child Lock Function:

① Hold down the OK and the OFF (+) buttons simultaneously until the "hold" indication disappears.

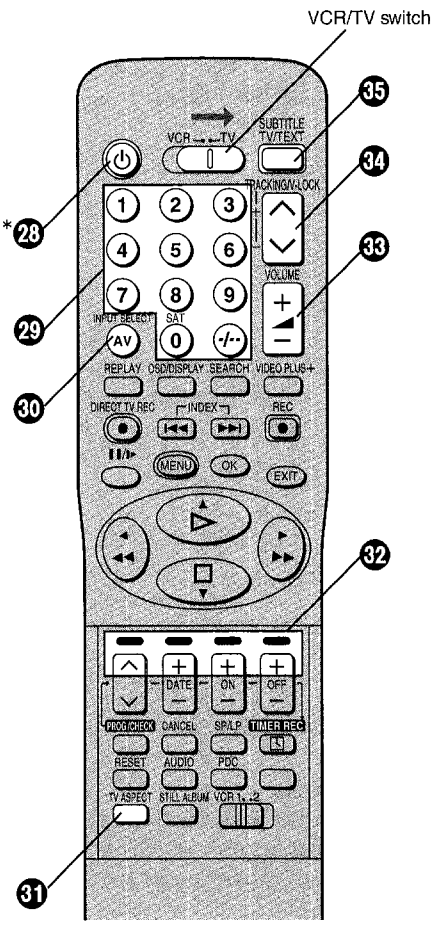
- If you disconnect the power cable, the Child Lock function is automatically cancelled after the power backup time of approximately 60 minutes has elapsed.

Controls and Layout of the Remote Control Continued...

TV Operation

This remote control can also be used to operate a TV.
The explanations below show you what functions individual buttons have when the VCR/TV switch is set to "TV".

The control marked with an asterisk (*) is further explained at the bottom of the page.



***28 TV-ON/OFF button (⏻)**
To switch the TV on from standby mode (OFF) or vice versa.

29 Numeric buttons
To select the programme positions (1-99) on the TV.

30 AV button (AV)
To select the desired AV input on the TV.

31 TV Screen Format button (TV ASPECT)
To switch the screen format between the wide-screen and other formats.

32 Teletext buttons
If your TV is equipped for Teletext reception, you can use these buttons to change the teletext information displayed on the screen and select desired information. For details, refer to your TV's operating instructions.

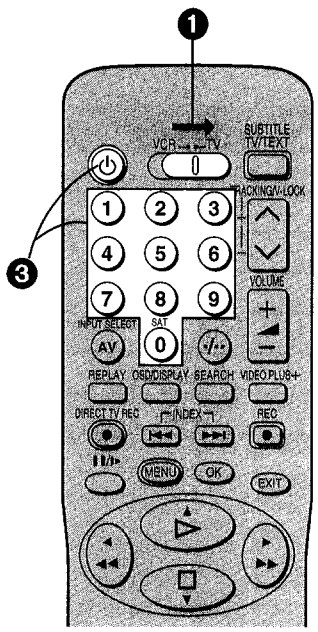
33 Volume button (◢)
To adjust the volume of the TV.

34 Channel button (∨∧)
To select the desired programme position (TV station) on the TV.

35 TV/Text button (TV/TEXT)
To switch between normal TV mode and teletext mode.

Hint:
***28TV-ON/OFF button (⏻)**
On some TVs it is only possible to switch the TV to standby mode (OFF) with this button, but not on. In this case, try to turn the TV on with one of the following buttons:
Numeric buttons
AV button (AV)
Channel button (∨∧)

Setting the Remote Control to Operate Your TV



This setting procedure allows you to operate the TVs of most brands using the remote control supplied with this VCR.

- Some TV models cannot be operated with this remote control.

❶ Set the VCR/TV switch to "TV".

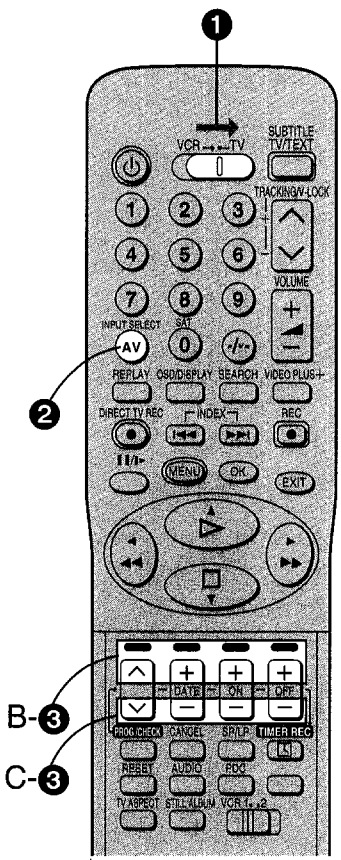
❷ Look up your TV's manufacturer in the list of TVs compatible with the VCR's remote control on the next page.

❸ While keeping the TV-ON/OFF button (⏻) pressed, use the Numeric buttons to enter the manufacturer's code.
If there is more than one code listed for that manufacturer, try the first code.
Be sure to enter the code in two digits.
Example: 01

❹ Check whether you can operate the TV correctly with the VCR's remote control.

If the TV cannot be operated properly:
In step ③, enter the other code listed for that manufacturer and repeat step ④.

The 3 Methods for Switching to the AV Input on Your Panasonic TV



Your Panasonic TV uses one of three different methods for switching between TV reception and the AV input(s). Perform the operations steps listed for the switching methods A, B and C below to determine which one your Panasonic TV uses.

A

❶ Set the VCR/TV switch to "TV".

❷ Press the AV button to switch to the AV Input.
Each press of the AV button switches between "TV reception" and "AV Input(s)"

B

❶ Set the VCR/TV switch to "TV".

❷ Press the AV button.
Colour bars for selecting the AV Input appear on the TV screen.

❸ Follow the instructions displayed on the TV screen to select the desired AV Input from the displayed colour bars for the AV Input by pressing the corresponding colour button ∧ (red), DATE+ (green), ON+ (yellow) or OFF+ (blue) on the remote control.

C

❶ Set the VCR/TV switch to "TV".

❷ Press the AV button.
The last previously selected AV Input indication appears on the TV screen.
The indications for selecting another AV Input also appear, but they disappear a few seconds later.

❸ Before the indications for selecting another AV Input disappears, press the ∨ button, DATE− button, ON− button or OFF− button to select the desired AV input.
With the following four buttons, you can move and select as follows:
∨: Move left
DATE−: Move down
ON−: Move up
OFF−: Move right

List of TVs Compatible with the VCR's Remote Control

Manufacturer	Code
Panasonic	01 - 04
AIWA	35
AKAI	27, 30
BLAUPUNKT	09
BRANDT	10, 15
BUSH	05, 06
CURTIS	31
DESMET	05, 31, 33
DUAL	05, 06
ELEMIS	31
FERGUSON	10
GOLDSTAR	31
GOODMANS	05, 06, 31
GRUNDIG	09
HITACHI	22, 23, 31, 40, 41, 42
INNO HIT	34
IRRADIO	30
ITT	25
JVC	17, 39
LOEWE	07
METZ	28, 31
MITSUBISHI	06, 19, 20
MIVAR	24
NEC	36
NOKIA	25 - 27
NORDMENDE	10
ORION	37
PHILIPS	05, 06
PHONOLA	31, 33
PIONEER	38
PYE	05, 06
RADIOLA	05, 06
SABA	10
SALORA	26
SAMSUNG	31, 32
SANSUI	05, 31, 33
SANYO	21
SBR	06
SCHNEIDER	05, 06, 29, 30, 31
SELECO	06, 25
SHARP	18

Manufacturer	Code
SIEMENS	09
SINUDYNE	05, 06, 33
SONY	08
TELEFUNKEN	10 - 14
THOMSON	10, 15
TOSHIBA	16
WHITE WESTINGHOUSE	05, 06

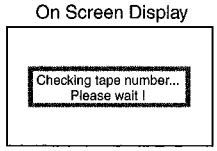
When You Insert a Video Cassette

The Tape Library System makes it easy to check what programmes are recorded on the inserted tape and lets you quickly select a programme for playback. For further details about the Tape Library System, see page 46.

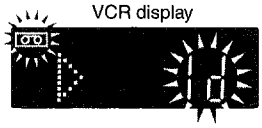
When you insert a cassette with an erasure prevention tab:

As soon as you insert the cassette, the Cassette Number Check starts automatically. Wait a few moments until this check is completed.

On Screen Display



VCR display



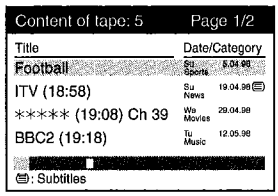
When you insert a cassette without an erasure prevention tab:

As soon as you insert the cassette, playback starts and the cassette number appears on the VCR display for several seconds. However, the cassette number and the cassette's contents (recorded programmes) do not appear on the On Screen Display.

(When loading cassette No. 5.)

When inserting a cassette that was recorded on this VCR:

When the Cassette Number Check is completed, the cassette number and the cassette's contents (recorded programmes) appear on the On Screen Display, and the cassette number appears on the VCR display.

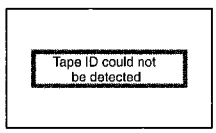


(When loading cassette No. 5.)

The cassette number and tape contents are not displayed for the following types of cassettes:

a. New (never used) cassettes.
b. Cassettes recorded on another VCR.
c. Cassettes whose cassette number was deleted from the Library data.
d. Certain other kinds of cassettes.

In the above cases, the following indications appear:



(This indication appears for several seconds.)

(This indication appears for several seconds.)

If you want to cancel the Cassette Number Check midway:

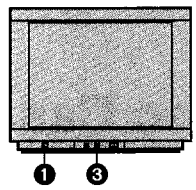
Press the Play (▷), Stop (□), EJECT or VCR-ON/OFF (⏻) button after the check has started.

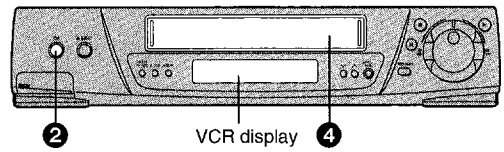
- No Tape Library data appears if you cancel the Cassette Number Check. (See page 47.)
- If you cancel the Cassette Number Check midway and then preform recording, a different cassette number may additionally be recorded on the cassette. However, this VCR will automatically cancel the added cassette number(s) when you play back the tape from the beginning.

To select a programme on the inserted cassette and start playback, see page 47.

To perform playback without making use of the Tape Library functions, recording or some other function, press the EXIT button to make the Tape Library indications disappear, and then operate the VCR for the desired function. Pressing the EXIT button is necessary even if the TV is not turned on.

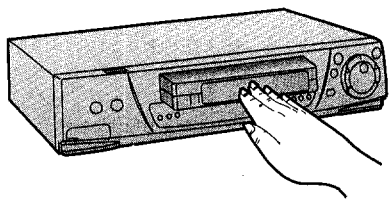
To perform playback, recording or some other function, operate the VCR for the desired function.



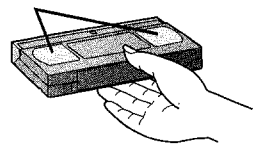


Playback

Inserting and Ejecting a Cassette

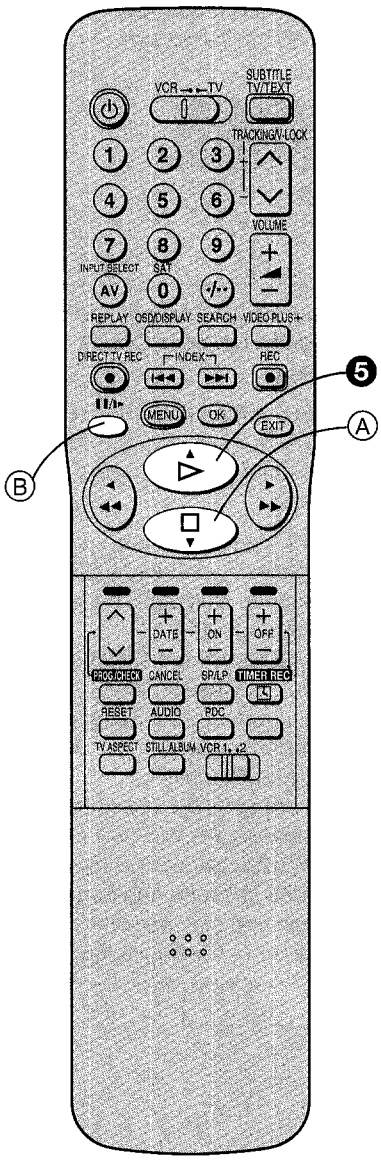


Cassette windows



Insert the cassette with the window side facing upward.

To eject a cassette press the Eject button on the VCR or hold down the Stop button (□) Ⓐ for more than 3 seconds.



Operation Steps	Confirmation of Operation
❶ **Switch the TV on.**	
❷ **Press the VCR-ON/OFF button (⏻/I) to switch the VCR on.**	
❸ **Select AV input on your TV.** • If the VCR is connected to your TV via RF coaxial cable only, select the video playback channel on the TV.	TV screen This indication may be different on your TV.
❹ **Insert the recorded video cassette.** • As soon as the cassette is inserted, the Cassette Number Check starts. Wait a few moments until it is completed. (See page 27.)	VCR display Indication when the video cassette is inserted
❺ **Press the Play button (▷).** • Playback starts.	 Indication displayed during playback

◆ To Stop Playback

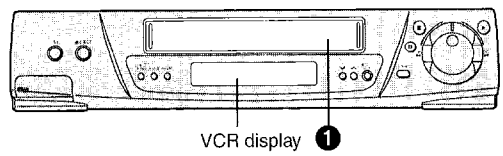
Press the Stop button (□) Ⓐ.

◆ To Pause Playback Briefly (Still Playback)

Press the Pause/Slow button (❚❚/▸) Ⓑ briefly.

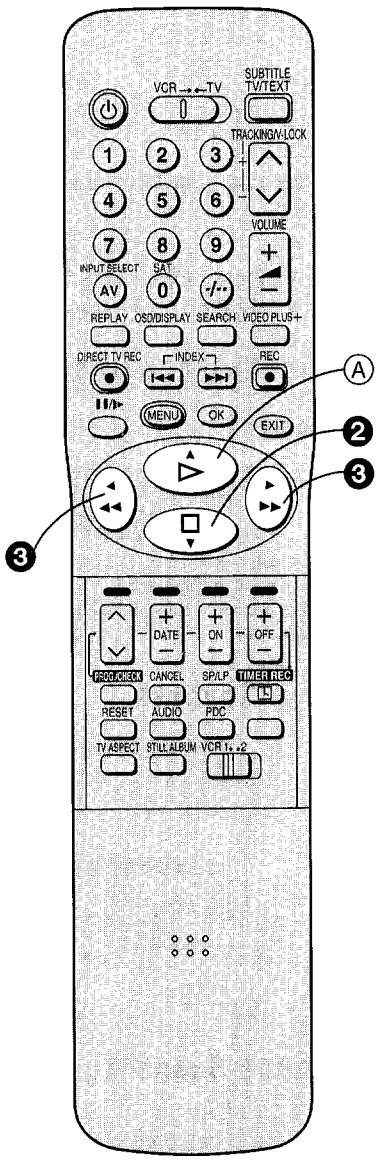
• If you leave the VCR in the still playback mode for more than 5 minutes, the VCR cancels this mode automatically to protect the tape and video heads, and it switches over to the stop mode.

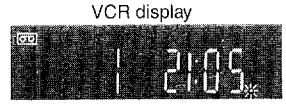
Indication during still playback



Other Playback and Convenient Functions

Described on this page are the operations for fast-forwarding and rewinding the tape. However, depending on whether the tape is stopped or is being played back, pressing the Fast Forward button (▶▶) or the Rewind button (◀◀) will activate a different function.
In addition, the activated function also differs depending on how long you press the button. Operate these buttons according to the intended function.



Operation Steps	Confirmation of Operation
Fast-forwarding or Rewinding the Tape ❶ **Insert a video cassette.** • As soon as the cassette is inserted, the Cassette Number Check starts. Wait a few moments until it is completed. (See page 27.) ❷ **Press the Stop button (□) to put the VCR in the stop mode. This prevents automatic playback start.** ❸ **To fast-forward the tape:** **Press the Fast Forward button (▶▶).** ❸ **To rewind the tape:** **Press the Rewind button (◀◀).** ◆ To stop fast-forwarding or rewinding, press the Stop button (□). ◆ To briefly view the picture during fast-forwarding or rewinding, press and hold down the corresponding button. ◆ You can also perform same operation by turning the Shuttle Ring clockwise or counterclockwise. **Fast-forwarding or Rewinding the Tape while Viewing the Playback Picture** **For Cue Playback:** During playback, press the Fast Forward button (▶▶) briefly. **For Review Playback:** During playback, press the Rewind button (◀◀) briefly. ◆ To resume normal playback, press the Play button (▷) Ⓐ. ◆ If you press and hold down the Fast Forward button (▶▶) or the Rewind button (◀◀), cue or review playback continues for as long as you keep the button pressed. ◆ You can also perform same operation by turning the Shuttle Ring clockwise or counterclockwise.	VCR display  Indication when the tape is stopped Indication during fast-forwarding or cue playback Indication during rewinding or review playback

Notes for special playback functions (except normal playback):

- During playback function other than normal playback, horizontal noise bars may appear in the picture, the colour of the picture may unstable, or the picture may be otherwise distorted.
  When you play back a tape recorded in the LP (Long Play) mode, the picture may be in black and white. However, these are not malfunctions.
- If cue or review playback continues for more than 10 minutes, the VCR automatically switches over to the normal playback mode to protect the tape and video heads.

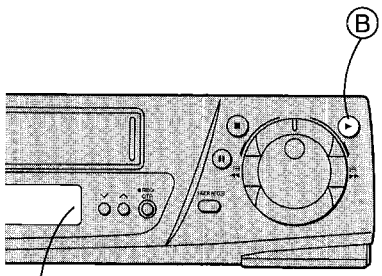
Other Playback and Convenient Functions Continued...

◆ To Perform Slow Playback

Press and hold down the Pause/Slow button (❚❚/▶) Ⓐ for more than 2 seconds during playback.

- If the slow playback mode continues for more than 10 minutes, the VCR cancels this mode automatically to protect the tape and video heads, and it switches over to the stop mode.

Indication during slow playback



VCR display

◆ To Stop Playback Automatically (Playback Off Timer Function)

If you set the playback duration, the playback will stop automatically.
After the set playback time has elapsed, the VCR automatically stops playback and switches off.

To Activate the Playback Off Timer Function:

During normal playback, press the Play button (▶) Ⓑ on the VCR for more than 2 seconds to put the VCR in the Playback Off Timer mode. (The indication shown below appears on the VCR display.)
After that, press the Play button (▶) on the VCR repeatedly until the desired playback duration is displayed on the VCR display.

- At each press of this button, the indication changes as follows:

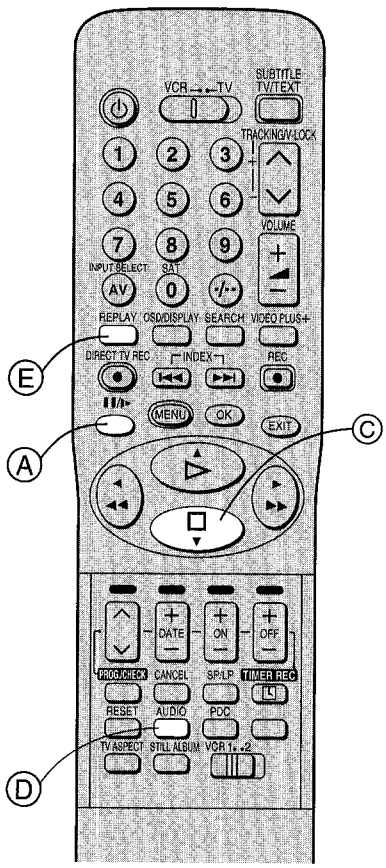
Counter display (normal playback mode) → 30 (min.) → 60 (min.) → 120 (min.) → 180 (min.) → 240 (min.) → Counter display (normal playback mode)

VCR display

Indication when the VCR is in the Playback Off Timer mode (a playback duration of 30 minutes is selected)

To Stop Midway:

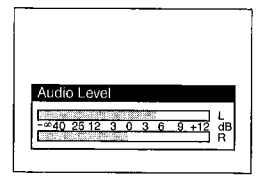
Press the Stop button (□) Ⓒ.



◆ To Select the Desired Sound Mode during Playback

Press the AUDIO button Ⓓ during playback.

On Screen Display



Every time you press this button, the audio output mode changes as follows:

Stereo → Left → Right → Normal audio track (Mono) → Stereo

◆ To Rewind the Tape a Little to View the Same Scene Again (Replay Function)

If you want to view the same scene again, for example because you could not catch clearly what a person said, simply press the REPLAY button Ⓔ, to rewind the tape a little from its present position and play it back again.
The direction in which the tape is rewound depends on what playback mode the VCR is in when you press the REPLAY button.

- If you press the REPLAY button when the VCR is in the stop, rewind, fast-forward, slow playback, or standby (Off) mode, the Replay function does not work.

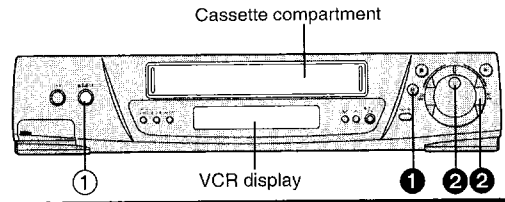
During Normal Playback, Cue Playback and Still Playback:

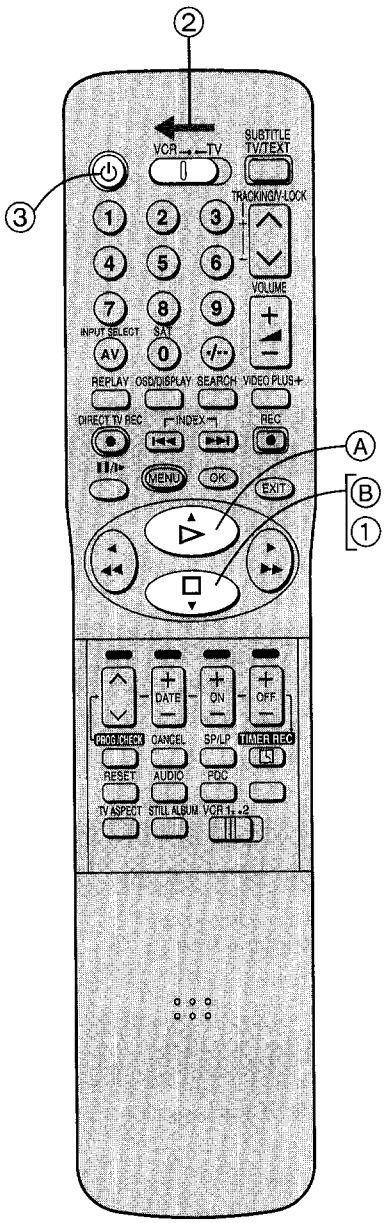
When you press the REPLAY button, the VCR switches over to the review playback mode for a few seconds and then resumes normal playback.

During Review Playback:

When you press the REPLAY button, the VCR briefly switches over to cue playback and then plays back at normal speed in forward direction from the point where the REPLAY button was pressed.

Other Playback and Convenient Functions Continued...

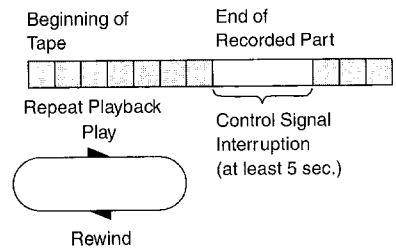


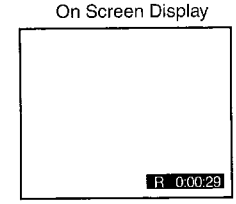


◆To Play Back a Recorded Part Repeatedly

Press the Play button (▷) Ⓐ on the Remote Control for more than 5 seconds.
The "R" indication appears on the On Screen Display.

- If "OSD" on the "Display" screen is set to OFF (See page 74), the "R" indication does not appear.





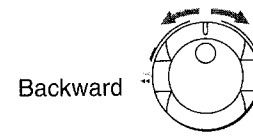
Indication of Repeat Playback mode

To Cancel the Repeat Playback Mode:
Press the Stop button (□) Ⓑ.

◆To Change the Playback Speed

❶ Press the Pause/Still button (❚❚) on the VCR.

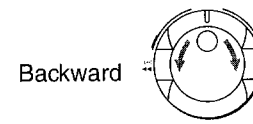
❷ Rotate the Shuttle Ring.



◆To Locate Precisely the Desired Moment in a Scene

❶ Press the Pause/Still button (❚❚) on the VCR.

❷ Turn the Jog Dial.



◆To Play Back NTSC Video Cassettes on Your PAL TV (Quasi-NTSC Playback Function)

This VCR allows playback of NTSC recorded tapes on a normal PAL TV.

On some TVs, however, the playback picture may roll up or down.

- If your TV has a V-HOLD control or equivalent adjustment function, use it to try to stop the picture movement. The height of the picture may not fill the complete screen.

◆Convenient Automatic Functions

This VCR features the following convenient functions:

- **VCR Auto Switch On**
  When you insert a video cassette, the VCR switches on automatically.
- **Auto Playback Start**
  When you insert a video cassette with a broken erasure prevention tab, playback start automatically without having to press the Play button (▷).
- **Auto Rewind (this function does not work during timer recording and OTR)**
  When the tape reaches the end, the VCR automatically rewinds it to the beginning.

◆After Use

① Press the EJECT button on the VCR and take out the cassette.

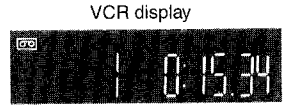
Or, press and hold the Stop button (□) on the remote control for more than 3 seconds and then take out the ejected cassette.

② Set the VCR/TV switch to "VCR".

③ Press the VCR-ON/OFF button (⏻) to switch the VCR off.

- Ejecting the video cassette is also possible when the VCR is off. It will switch on, eject the cassette and then switch off again.

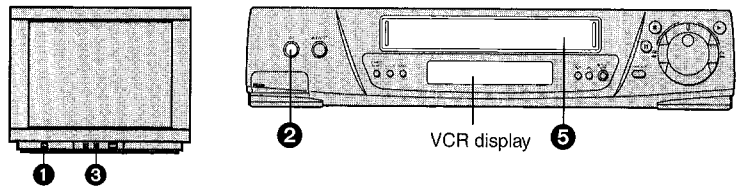
VCR display



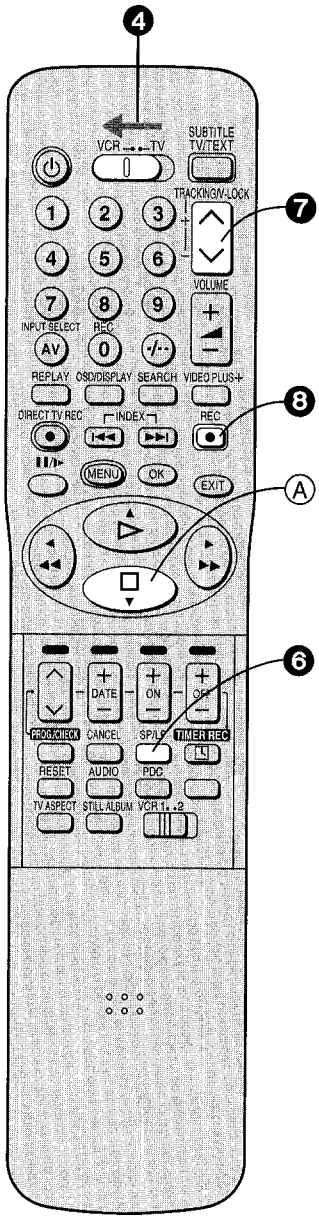
Indication when a video cassette is inserted

Cassette indication disappears.

Playback



Recording



Operation Steps	Confirmation of Operation
❶ **Switch the TV on.**	
❷ **Press the VCR-ON/OFF button (⏻/I) to switch the VCR on.**	
❸ **Select the AV input on your TV.** • If the VCR is connected to your TV via RF coaxial cable only, select the video playback channel on the TV.	TV screen This indication may be different on your TV.
❹ **Set the VCR/TV switch to "VCR".**	
❺ **Insert a video cassette with intact erasure prevention tab. (See page 36.)** • As soon as the cassette is inserted, the Cassette Number Check starts. Wait a few moments until it is completed. (See page 27.)	VCR display Indication when the video cassette is inserted
❻ **Press the SP/LP button to set the desired tape speed.** • SP provides standard recording time and optimum picture quality. LP provides doubled recording time with slightly reduced picture quality.	 Indication when SP is selected
❼ **Press the Channel button (∨) or (∧) to select the programme position of the TV programme that you want to record.**	 Indication of the selected programme position
❽ **Press the REC button.** • Recording starts.	 Indication during recording

◆ To Stop Recording

Press the Stop button (□) Ⓐ.

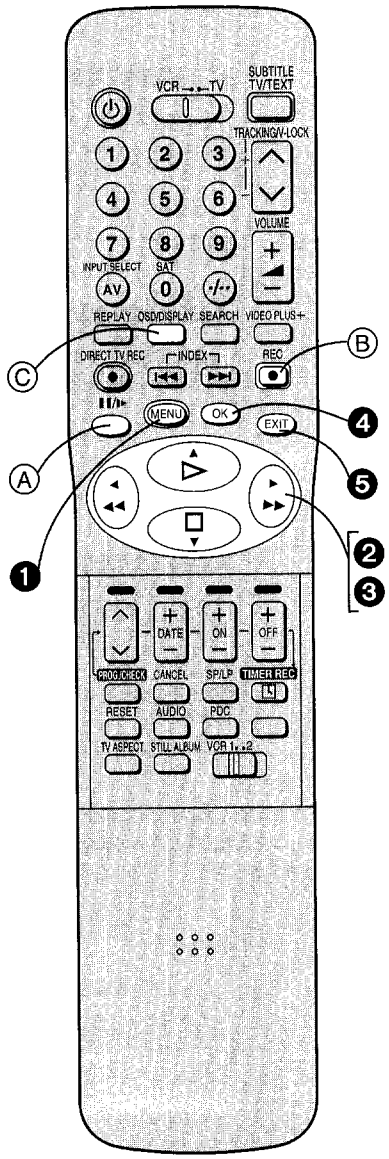
Hint:

- We do not recommend the use of tapes longer than E240 type as the tape can be too thin.

Note about the Tape Speed (SP/LP):

The initial setting is "SP".
SP stands for Standard Play.
LP stands for Long Play.

Recording Continued...

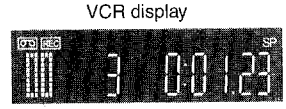


◆To Pause Recording

Press the Pause/Slow button (❚❚/►) Ⓐ.
To resume recording, press the Pause/Slow button (❚❚/►) again.

- If you leave the VCR in the pause mode for more than 5 minutes, the VCR cancels this mode automatically, and it switches over to the stop mode.

VCR display



Indication during recording pause

◆To View One TV Programme while Recording Another TV Programme

After pressing the REC button Ⓑ to start recording, select on your TV the programme position of the TV programme that you want to view.

◆To Confirm the Approximate Remaining Tape Time

The remaining tape time can be displayed on the On Screen display and in the VCR display.
Condition for correct display of the remaining tape time:

- The tape length of the tape being used must be set correctly. (For example, select the tape length "<E-180" for a 180-minute cassette.)

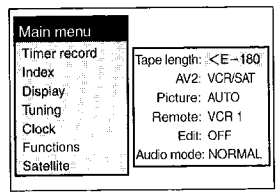
To Set the Tape Length:

❶ Press the MENU button to make the Main menu appear on the TV screen.

❷ Use the Cursor buttons (▲▼◄►) to select "Functions", "Tape length", and "<E-180" in this order.

❸ Press the Cursor buttons (▲▼) to select the tape length of the video cassette you are using.
<E-180: For E30, -60, -90, -120 and -180 tapes
E-195: For E195 tape
E-240: For E240 tape
E-260>: For E260 and -300 tapes

On Screen Display

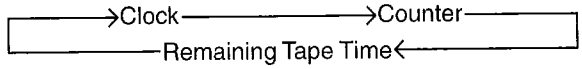


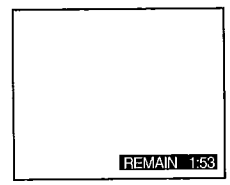
Menu for setting the Tape Length setting

❹ Press the OK button to conclude the setting.

❺ Press the EXIT button to exit the menu.

To Display the Remaining Tape Time:
Press the OSD/DISPLAY button Ⓒ until the remaining tape time is displayed on the On Screen Display.
Pressing the OSD/DISPLAY button once makes the On Screen Display appear; after that, pressing it repeatedly changes the indication in the following order:





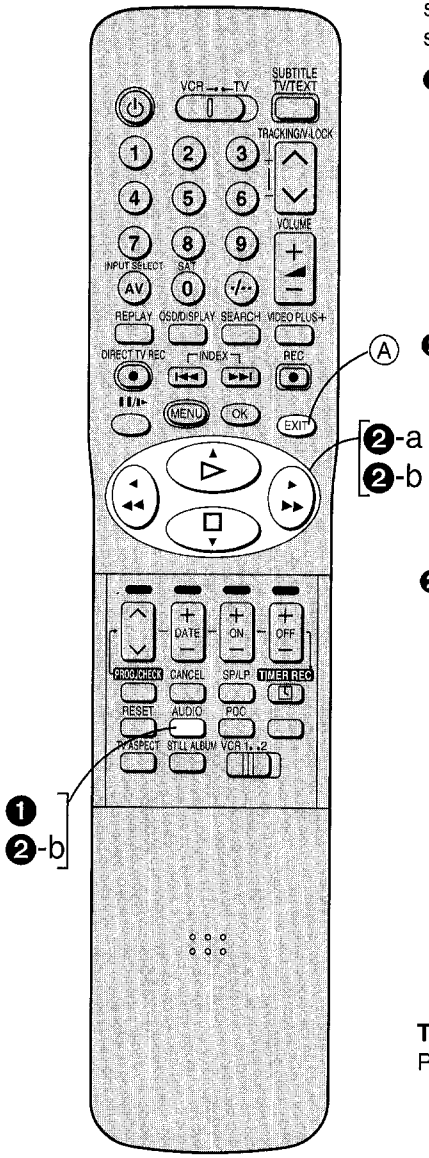
Indication of the remaining tape time

- For certain cassettes, the remaining tape time may not be displayed correctly.
- If "OSD" on the "Display" screen is set to OFF (See page 73), the indication of the remaining tape time does not appear on the On Screen display.

Hint:

- In some cases, it may not be possible to change the programme position on the TV during Direct TV Recording.

Recording Continued...

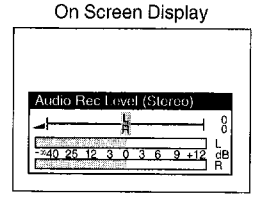


◆ To Manually Adjust the Audio Recording Level

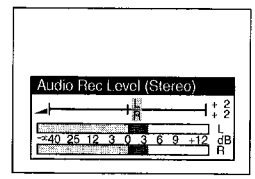
This VCR adjusts the recording level automatically to prevent sound distortion due to excessive peaks.
However, if you want to manually adjust the audio recording level, perform the operation steps below before you start the actual recording. We recommend you to adjust the level so that it peaks at approximately +4 dB on the recording level indicator.

❶ Before recording, press the AUDIO button.

On Screen Display

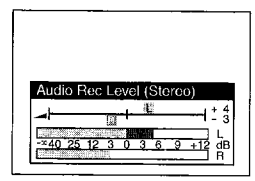


❷-a To adjust the left (L) and right (R) channels simultaneously:
Press the Cursor buttons (◄►) to adjust the audio recording level.



❷-b To adjust the left (L) and right (R) channels individually, use either of the following two operation methods:
Press the Cursor buttons (▲▼) to select either the left (L) or right (R) channel and individually adjust their audio recording level with the Cursor buttons (◄►).

Press the AUDIO button repeatedly to select either the left (L) or right (R) channel and individually adjust their audio recording level with the Cursor buttons (◄►)

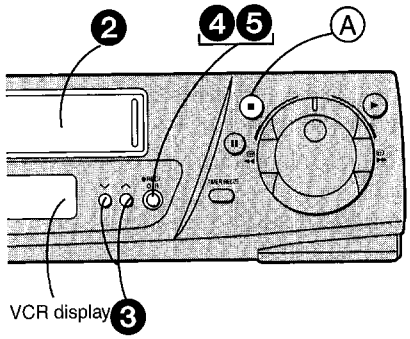


Example:
When the left (L) channel is selected.

- Adjusting the audio recording level of the normal audio track (mono) is only possible when recording from an external source (AV1, AV2 or AV3), but not when recording TV programmes via the VCR's built-in tuner.

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

Recording Continued...



◆ To Select the Recording Duration and Perform Recording (OTR Recording)

OTR means One-Touch Recording and is called this way, because you can start recording and select the recording duration simply by repeatedly pressing a single button. This is very convenient, for example when you want to start recording immediately but need to go out or want to go to bed.
After the selected recording duration has elapsed, recording stops and the VCR automatically switches off.

To Perform an OTR Recording:

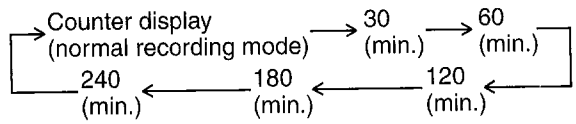
❶ Display the VCR picture on the TV.

❷ Insert a video cassette with an intact erasure prevention tab.
- As soon as the cassette is inserted, the Cassette Number Check starts. Wait a few moments until it is completed.
(See page 27.)

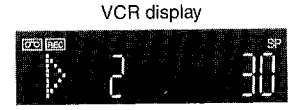
❸ Press the Channel buttons (∨∧) to select the programme position on which the TV programme to be recorded will be broadcast.

❹ Press the REC/OTR button to start recording.

❺ Press the REC/OTR button repeatedly to select the desired recording duration.
- Every time you press this button, the recording duration indicated in the VCR display changes in the following order.
- For example, if you select "30", the VCR records a programme from that moment on for 30 minutes.



VCR display



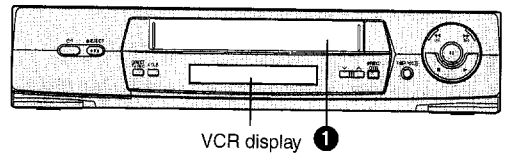
Indication when recording duration "30" is selected

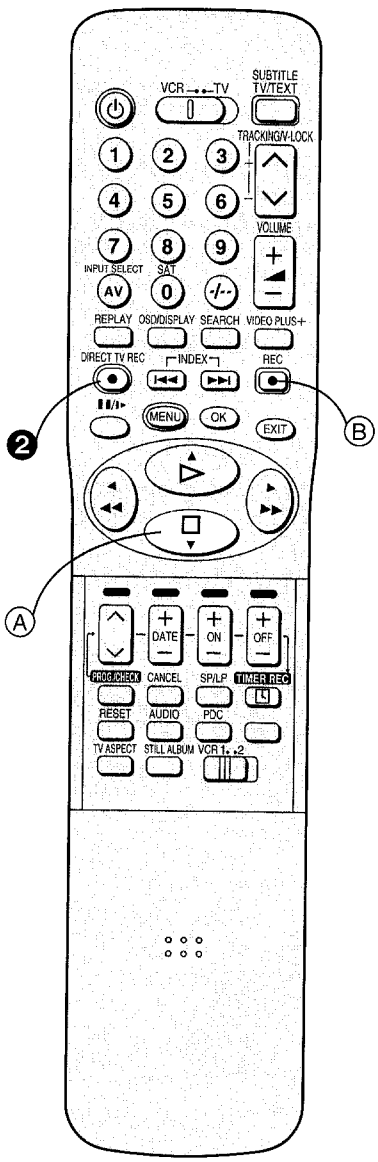
To Stop the OTR Recording Before the End:
Press the Stop button (■) Ⓐ.

Recording

Note:
- This function also works during Direct TV Recording.

Recording Continued...





◆To Immediately Record the Same TV Programme That You Are Viewing on the TV (Direct TV Recording)

This function allows you to immediately start recording the same programme that you are viewing on the TV.
The programme position selected on the VCR automatically changes to that of the TV programme that you are viewing on the TV. When you stop the recording, the VCR automatically switches back to the previously selected programme position.

Conditions for correct functioning of the Direct TV Recording function:
- Your TV must be equipped with the "Q Link" function.
- The VCR must be connected to the TV via a fully-wired 21-pin Scart cable.

To Perform Direct TV Recording:

❶ Insert a video cassette with an intact erasure prevention tab.
- As soon as the cassette is inserted, the Cassette Number Check starts. Wait a few moments until it is completed. (See page 27.)

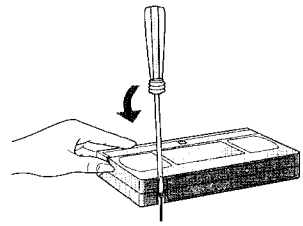
❷ Press the DIRECT TV REC button.
- Recording of the TV programme that you are viewing on the TV starts.

Indication during recording

To Stop Recording:
Press the Stop button (□) Ⓐ.

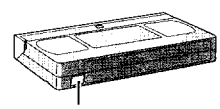
◆To Prevent Accidental Erasure of Recorded Contents

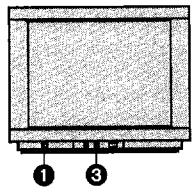
When you record again onto a previously recorded video cassette, the previous recording is automatically erased and replaced with the new recording. Therefore, to prevent accidental erasure of the recorded contents, break out the erasure prevention tab after recording.

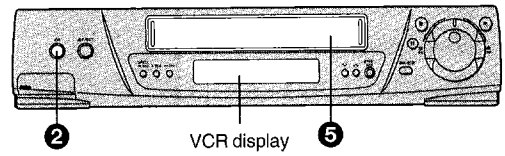

Erasure prevention tab

Use a screwdriver or similar tool to break out the tab.

To Record Again onto the Video Cassette with a Broken Out Erasure Prevention Tab:
If you insert a video cassette with a broken out erasure prevention tab and press the REC button Ⓑ, the "OO" indication flashes on the VCR display to indicate that recording is not possible.
In this case, cover the tab hole with two layers of adhesive tape. The adhesive tape substitutes for the prevention erasure tab and makes it possible to record again on this cassette.


Adhesive tape

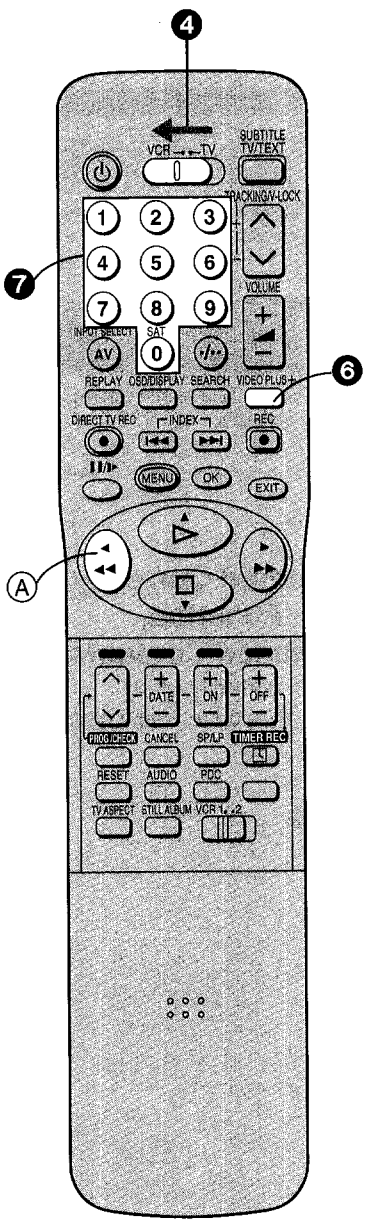




Timer Recording

This function lets you programme the VCR for unattended automatic recording of desired TV programmes when you are not at home or sleeping.
You can programme timer recordings in two different ways:
(1) By entering the Video Plus+ PlusCode published alongside the TV programme listings in newspapers and magazines (explained below) or;
(2) By entering the necessary information with the remote control while viewing the On Screen Display (OSD) on the TV screen (see page 40).

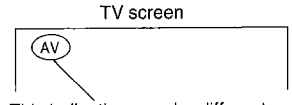
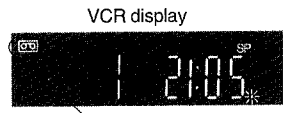
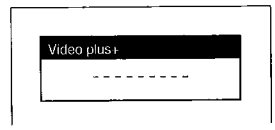
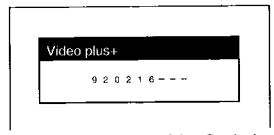
This VCR lets you programme up to 8 TV programmes (including weekly and daily programmes) for unattended recording up to one month in advance.



(1) Programming with the Video Plus+ Function

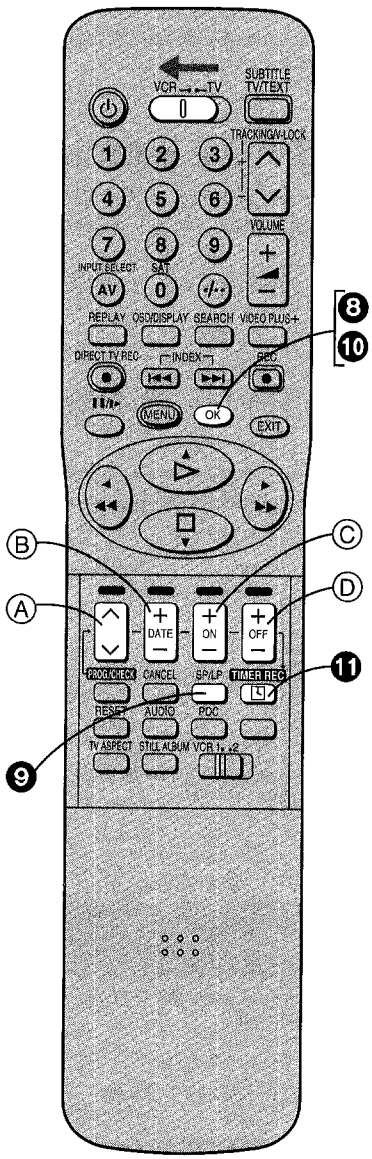
The Video Plus+ PlusCodes (numbers) assigned to each TV programme and published alongside the TV programme listings in newspapers and magazines make it extremely easy to set the VCR for timer recording.
The duration of a timer recording programmed with Video Plus+ PlusCode may be slightly longer than the actual duration of the TV programme.

Example:
Programming a timer recording of a TV programme with the Video Plus+ PlusCode 920126

Operation Steps	Confirmation of Operation
❶ **Switch the TV on.**	
❷ **Press the VCR-ON/OFF button (⏻/I) to switch the VCR on.**	
❸ **Select the AV input on your TV.** • If the VCR is connected to your TV via RF coaxial cable only, select the video playback channel on the TV.	TV screen  This indication may be different on your TV.
❹ **Set the VCR/TV switch to "VCR".**	
❺ **Insert a video cassette with an intact erasure prevention tab. (See page 36.)** • As soon as the cassette is inserted, the Cassette Number Check starts. Wait a few moments until it is completed. (See page 27.)	VCR display  Indication when the video cassette is inserted
❻ **Press the VIDEO PLUS+ button to display the menu for entering the PlusCode on the TV.**	On Screen Display  Menu for entering the PlusCode
❼ **Press the Numeric buttons to enter the PlusCode.** • If you have entered a wrong digit, press the Cursor button (◀) Ⓐ and then enter the correct digit.	 Indication when the PlusCode is entered

(continued on the next page)

Timer Recording Continued...



Operation Steps	Confirmation of Operation
❽ **Press the OK button to display the programmed content.**	
❾ **Press the SP/LP button to set the desired tape speed.** • SP provides standard recording time and optimum picture quality. LP provides doubled recording time with slightly reduced picture quality. Regarding the "A" indication, refer to page 43.	On Screen Display Timer recording Pos Name DATE Start ON Stop OFF SP LP PDC Min BBC2 27/10 We 20:00 21:30 SP OFF 90 Indication when SP is set
❿ **Press the OK button again to conclude the setting.** • To programme additional timer recordings, repeat operation steps ❻-❿.	Timer recording Pos Name DATE Start ON Stop OFF SP LP PDC Min BBC2 27/10 We 20:00 21:30 SP OFF 90 Indication when the settings are concluded
⓫ **Press the TIMER REC button to switch the VCR over to the timer recording standby mode.** • At the programmed date and time, the recording will start automatically.	VCR display 21:08 Indication of the timer recording standby mode

◆ If the Programming Contents Are Not Entered Correctly When Programming with the Video Plus+ Function, or When You Want to Change the Programmed Contents

In some cases, the programming contents may not be entered correctly when programming a timer recording with the Video Plus+ function. In such a case, correct the wrong or missing information in the following way:

To Correct:

After displaying the programmed contents in operation step ❾, perform the follwing steps:

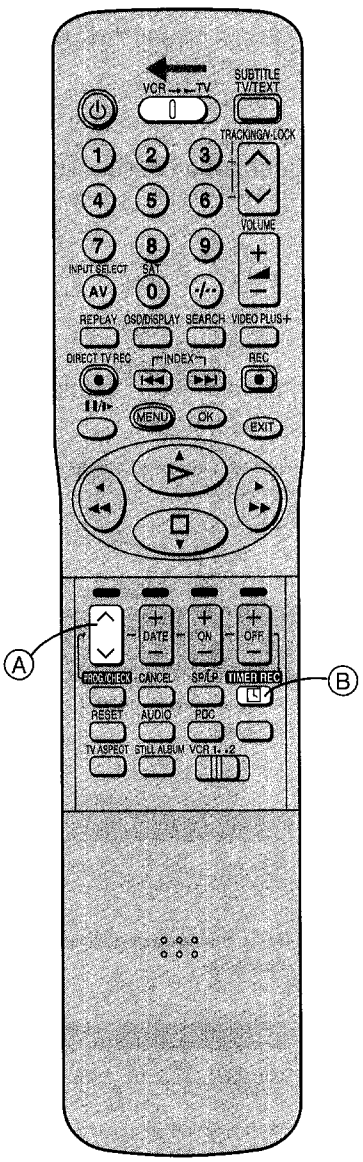
To change the programme position:
Use the Channel button (∨∧) Ⓐ.

To change the date of timer recording:
Use the DATE button Ⓑ.

To change the recording starting time:
Use the ON button Ⓒ.

To change the recording ending time:
Use the OFF button Ⓓ.

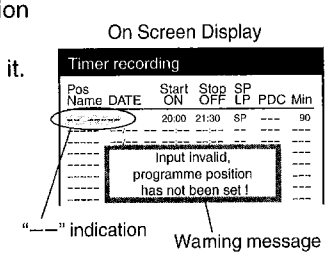
Timer Recording Continued...



◆ If "——" Appears under "Pos/Name" after Entering a Video Plus+ PlusCode (Number)

Pos/Name stands for Programme Position/TV Station Name.
Normally, the name of the TV station or the number of the programme position is displayed under "Pos/Name".
However, if the TV station information was not automatically set during Preset Download or Auto Setup due to adverse reception conditions or a satellite channel is used for the first time, the "——" indication appears instead.
In such a case, follow the operation steps below to correct it.

On Screen Display



Press the Channel button (∨) or (∧) Ⓐ repeatedly to select the programme position on which the TV programme to be recorded will be broadcast.

After you have entered the information of a TV station, it remains stored in the VCR's memory, and you do not need to enter it again in the future.

◆ To Suspend the Timer Recording Standby Mode

When you want to use the VCR for playback, normal recording or some other operation before the programmed timer recording will be performed, you can temporarily suspend the timer recording standby mode by pressing the TIMER REC button Ⓑ so that the "⏲" indication on the VCR display disappears.

However, after you have finished using the VCR, be sure to reactivate the timer recording standby mode by pressing the TIMER REC button again, otherwise the programmed timer recording will not be performed.

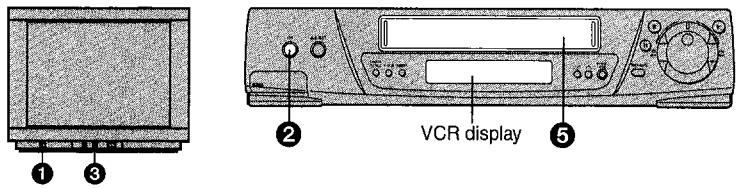
VCR display

The indication of the timer recording standby mode disappears

Hints:

- After programming a timer recording, confirm that the "⏲" indication is displayed in the VCR display. If the "⏲" indication is flashing, check the timer programming contents and programme it again correctly.
- About 10 minutes before the programmes starting time, if the VCR has not been put in timer recording standby mode, the "⏲" indication flashes on the VCR display. In this case, press the TIMER REC button to put the VCR in the timer recording standby mode.

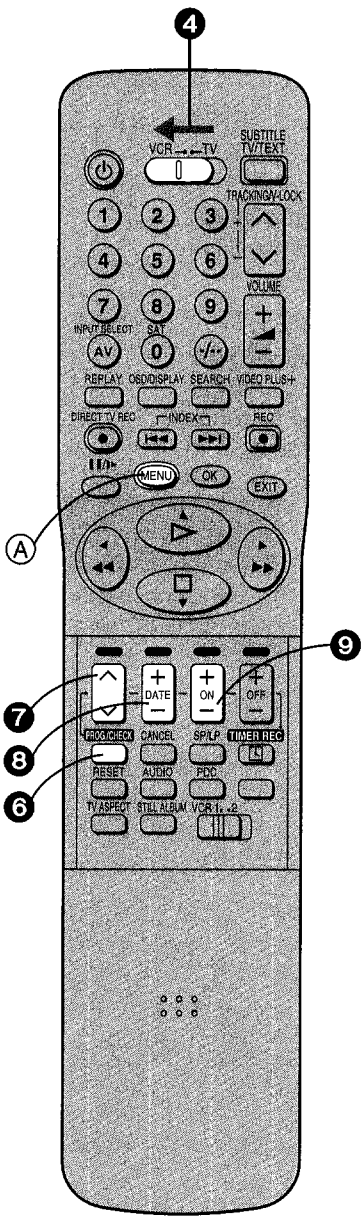
Timer Recording Continued...

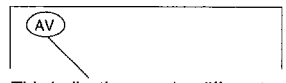
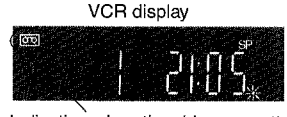
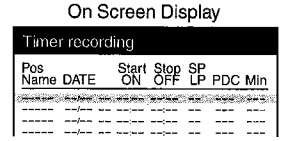
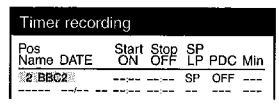
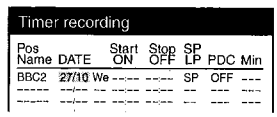
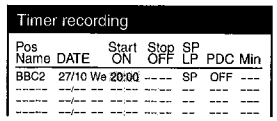


(2) Programming with the On Screen Display

This method offers easy step-by-step programming with the remote control while you view the prompts on the TV screen.

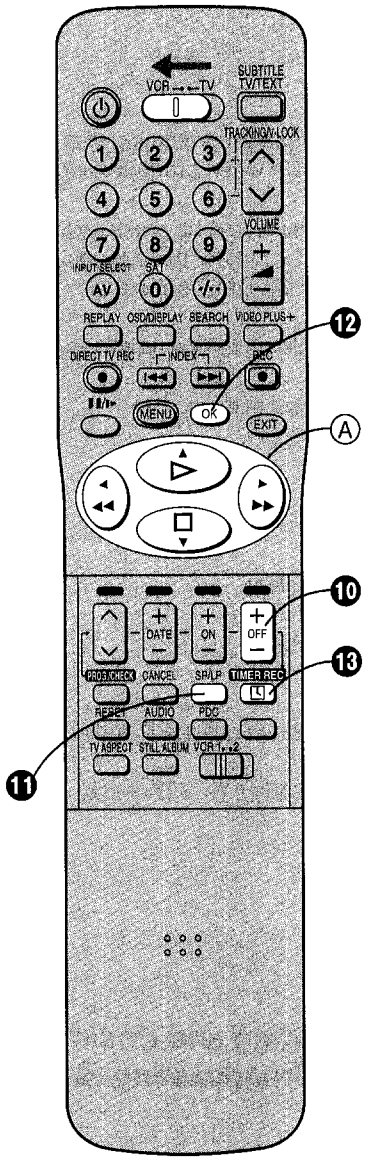
Example:
Programming the timer recording of a TV programme broadcast on programme position (channel) 2 from 20:00 to 21:30 on 27 October.



Operation Steps	Confirmation of Operation
❶ **Switch the TV on.**	
❷ **Press the VCR-ON/OFF button (⏻/I) to switch the VCR on.**	
❸ **Select the AV input on your TV.** • If the VCR is connected to your TV via RF coaxial cable only, select the video playback channel on the TV.	TV screen  This indication may be different on your TV.
❹ **Set the VCR/TV switch to "VCR".**	
❺ **Insert a video cassette with an intact erasure prevention tab. (See page 36.)** • As soon as the cassette is inserted, the Cassette Number Check starts. Wait a few moments until it is completed. (See page 27.)	VCR display  Indication when the video cassette is inserted
❻ **Press the PROG./CHECK button to display the menu for programming timer recordings on the TV screen.** • Alternatively, you can press the MENU button Ⓐ and then select "Timer record".	On Screen Display  Menu for programming timer recordings
❼ **Press the Channel button (∨) or (∧) to select the programme position of the desired TV station.**	 Indication when programme position 2 is set
❽ **Press the DATE button to set the date on which the TV programme will be broadcast.**	 Indication when 27/10 is set
❾ **Press the ON button to set the starting time.**	 Indication when 20:00 is set

(continues on the next page)

Timer Recording Continued...



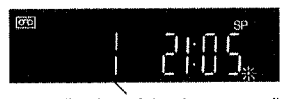
Operation Steps	Confirmation of Operation
⑩ **Press the OFF button to set the ending time.**	On Screen Display Timer recording Pos Name DATE Start ON Stop OFF SP LP PDC Min BBC2 27/10 We 20.00 21:30 SP OFF 90 Indication when 21:30 is set
⑪ **Press the SP/LP button to set the desired tape speed.** • SP provides standard recording time and optimum picture quality. LP provides doubled recording time with slightly reduced picture quality. Regarding the "A" indication, refer to page 43.	Timer recording Pos Name DATE Start ON Stop OFF SP LP PDC Min BBC2 27/10 We 20.00 21:30 SP OFF 90 Indication when SP is set
⑫ **Press the OK button to conclude the settings.** • To programme additional timer recordings, repeat operation steps ❼-⑫.	Timer recording Pos Name DATE Start ON Stop OFF SP LP PDC Min BBC2 27/10 We 20.00 21:30 SP OFF 90 Indication when the settings are concluded
⑬ **Press the TIMER REC button to switch the VCR over to the timer recording standby mode.** • At the programmed date and time, the recording will start automatically.	VCR display 21:08 Indication of the timer recording standby mode

Timer Recording

◆ To Suspend the Timer Recording Standby Mode

When you want to use the VCR for playback, normal recording or some other operation before the programmed timer recording will be performed, you can temporarily suspend the timer recording standby mode by pressing the TIMER REC button so that the "⏲" indication on the VCR display disappears.

However, after you have finished using the VCR, be sure to reactivate the timer recording standby mode by pressing the TIMER REC button again, otherwise the programmed timer recording will not be performed.



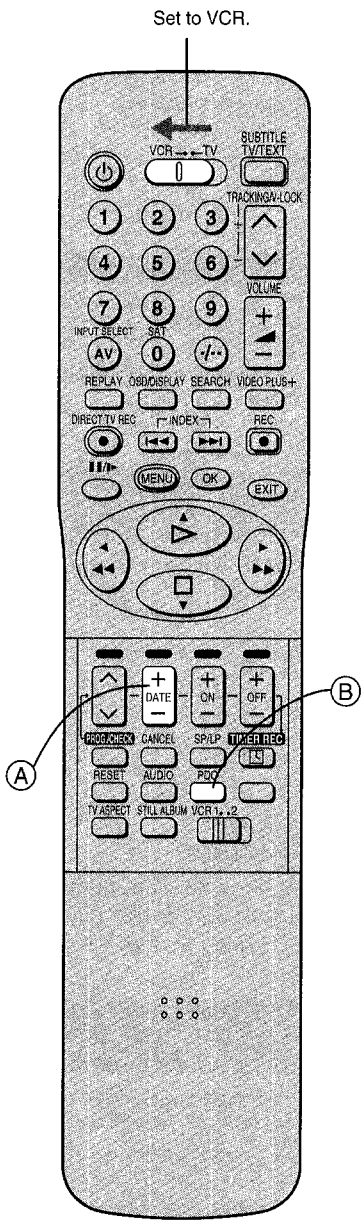
The indication of the timer recording standby mode disappears

Hints:

- When you set the starting or ending times, keeping the ON or OFF button pressed changes the indication in 30-minute steps.
  You can also set the starting and ending times by pressing the numeric buttons instead of the ON and OFF button.
- After programming a timer recording, confirm that the "⏲" indication is displayed on the VCR display.
  If the "⏲" indication is flashing, check the timer programming contents and programme it again correctly.
- If the VCR is not put in the timer recording standby mode at the latest 10 minutes before the programmed timer recording starting time, the "⏲" indication flashes on the VCR display. In this case, press the TIMER REC button to put the VCR in the timer recording standby mode.
- Performing the operation steps ❽-⑪ with the Cursor buttons (▲▼◀▶) Ⓐ is also possible.

Timer Recording and Other Convenient Functions

This VCR is equipped with the following functions that facilitate the programming of timer recordings.
① Setting the recording date/day(s)
② Setting for control of the recording start and end time by special signal included in the broadcasting signal (PDC Function)
③ Ensuring that a TV programme will be recorded until its end (Auto SP/LP Change Function)
④ Programming a timer recording of a satellite programme



① Setting the Recording Date/Day(s)

Perform this operation in operation step ❾ (see page 38) when programming with the Video Plus+ PlusCodes, or in operation step ❽ (see page 40) when programming a timer recording with the On Screen Display.
You can select the recording date (day of the month/day of the week) by pressing the DATE button Ⓐ. If you repeatedly press the + side of the DATE button, the indication changes in the order shown below. If you press the – side of the DATE button, the indication changes in the opposite order.

- Programming a timer recording (setting the date) is possible up to one month ahead of the TV programme's broadcasting date and time.
  Daily and weekly timer recordings will continue until you cancel them.

<To Programme within 1 Month>
Example: 1 2 31
↓
<To Programme a Daily Timer Recording>
Example: Daily recording from Sunday to Saturday (Su-Sa).
Daily recording from Monday to Saturday (Mo-Sa).
Daily recording from Monday to Friday (Mo-Fr).
↓
<To Programme a Weekly Timer Recording>
Example: Weekly recording every Sunday Weekly recording every Monday...
Weekly recording every Saturday
(Su = Sunday, Mo = Monday, Tu = Tuesday, We = Wednesday, Th = Thursday, Fr = Friday, Sa = Saturday)

② Setting for Control of the Recording Starting and Ending Time by Special Signal Included in the Broadcasting Signal (PDC Function)

PDC stands for Programme Delivery Control.
If a TV programme, for example a football game runs longer than scheduled, is shortened or starts earlier or later, this function synchronises the recording start and stop with the actual broadcasting start and stop of the TV programme.

Conditions for correct operation of the PDC function:

- "ON" must be displayed under "PDC" on the On Screen Display.
- The TV station must broadcast PDC signals.
- The programme starting time must be set correctly to the starting time listed in the newspaper/magazine.

To Activate the PDC Function:
In operation step ❾ (see page 38) when programming with the Video Plus+ PlusCodes, or after operation step ⓫ (see page 41) when programming a timer recording with the On Screen Display, press the PDC button Ⓑ to make the ON indication appear.
See page 78 for details.

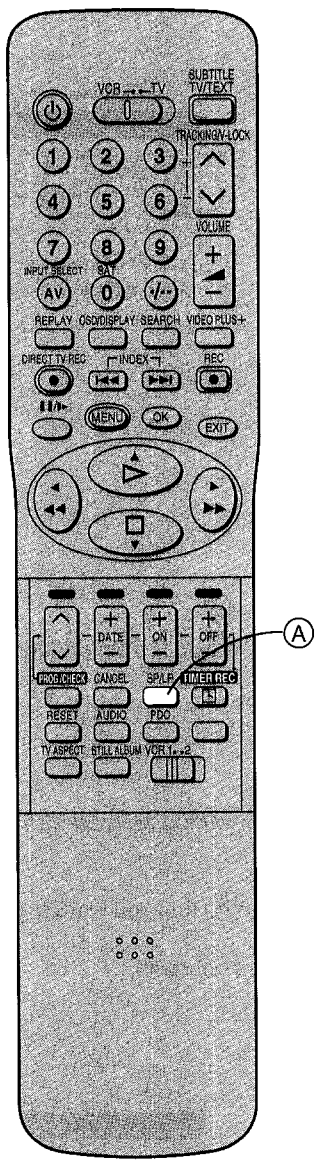
On Screen Display

Timer recording

Pos	Name	DATE	Start ON	Stop OFF	SP LP	PDC	Min
BBC2		27/10 We	20:00	21:30	SP	ON	90
-----		--/-- --	--:--	--:--	--	---	---
-----		--/-- --	--:--	--:--	--	---	---
-----		--/-- --	--:--	--:--	--	---	---

Indication when "ON" is selected

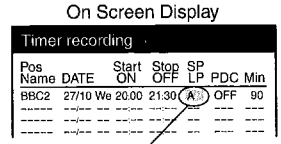
Timer Recording and Other Convenient Functions Continued...



③ Ensuring that a TV Programme Will Be Recorded Until Its End (Auto SP/LP Change Function)

If, at the start of a timer recording, the VCR determines that the remaining tape time is insufficient to record the whole programme, the Auto SP/LP Change function automatically selects LP mode to ensure that the whole programme will be recorded. However, if the remaining tape time is still not sufficient even in the LP mode, the programme cannot be recorded to its end.

On Screen Display



Indication when "A" is selected

- If you programme a daily or weekly timer recording, recording will be performed in the LP mode from the start regardless of the remaining tape time.
- In case of a timer recording programmed with the PDC function, if the TV programme continues past the programmed ending time, the VCR automatically switches over to the LP mode at that moment. However, in some cases it may not be possible to record the programme until its end.
- Use a video cassette on which a few minutes more than the total length of programmed timer recordings remain, otherwise the programmed timer recordings may be performed in the LP mode.
- Be careful that the broadcast times of the TV programmes set for timer recording do not overlap, otherwise the programmed timer recordings may be performed in the LP mode.
- If the recording speed changes from SP to LP during a timer recording, some brief picture distortion occurs at that point.

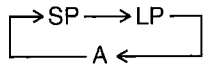
Condition for correct operation of the Auto SP/LP Change function:

- The tape length of the inserted cassette must be set correctly.

To Activate the Auto SP/LP Change Function:

In operation step ❾ (See page 38) when programming with the Video Plus+ PlusCodes, or in operation step ⓫ (See page 41) when programming a timer recording with the On Screen Display, press the SP/LP button Ⓐ to select "A".

- When you press this button repeatedly, the indication changes in the following order:



④ Programming a Timer Recording of a Satellite Programme

The programming of a timer recording of a satellite programme can be performed in the same way as for normal (terrestrial) TV programmes.

Conditions for correct operation of this function:

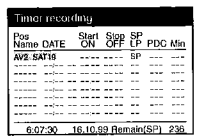
- When selecting the programme position, be sure to use the Numeric buttons to select the satellite channel.

Example of selecting satellite programme positions 9, 19 and 129

SAT 9: SAT 0 → SAT 0 → 9

SAT 19: SAT 0 → 1 → 9

SAT 129: SAT 0 → 1 → 2 → 9

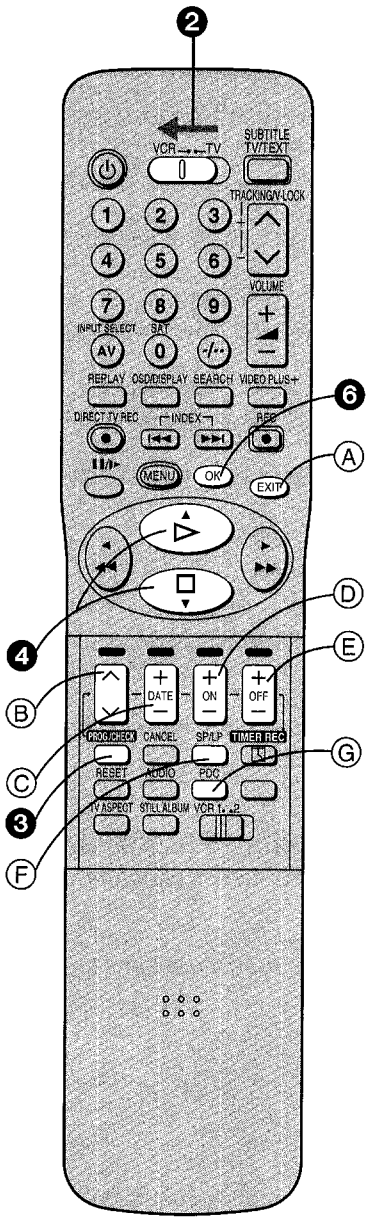


3-digit programme positions can be selected with this remote control only in case of a satellite receiver that is marked with (*1) on the enclosed list of compatible satellite receivers.

Notes for Programming a Timer Recording of a Satellite Programme:

- When programming a timer recording of a satellite programme, it is not possible to activate the PDC function.
- On some satellite receivers, the power may be turned off for a few seconds before a timer recording is actually started and recording may not be performed for those first few seconds. To ensure recording from the beginning of the programme, we recommend that you set the recording start time about a minute earlier than that listed in the newspaper/magazine.
- After the timer recording has finished, some satellite receivers switch off automatically, but the recording has been performed as programmed.
- If a power failure occurs during the timer recording of a satellite programme, the timer recording may not resume when the power is restored.
- Timer recording of pay-per-view satellite programmes is not possible.
- Timer recording of satellite programmes from a satellite receiver or satellite receiver channel for which the PIN code has been entered is not possible.
- Timer recording of satellite programmes for which the parental control function has been activated is not possible.

Checking, Changing or Cancelling a Timer Recording Programme



◆ To Check the Contents of Timer Recording Programmes

❶ Display the VCR picture on the TV.

❷ Set the VCR/TV switch to "VCR".

❸ Press the PROG./CHECK button to display the timer recording programmings on the TV screen.
- When the VCR is in the timer recording standby mode for a PDC recording, the On Screen Display may be distorted.

On Screen Display

Timer recording

Pos Name	DATE	Start ON	Stop OFF	SP LP	PDC	Min
BBC2	27/10 We	20:00	21:30	SP	ON	90
BBC1	30/10 Sa	19:00	20:00	LP	OFF	60
SKY G	Su	21:00	23:00	SP	----	120
BBC2	Su-Sa	17:30	18:00	LP	ON	30

Menu for checking the timer recording programming(s)

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

◆ To Change a Timer Recording Programme

It is not possible to change a programme while the timer recording is being performed.

❶ Display the VCR picture on the TV.

❷ Set the VCR/TV switch to "VCR".

❸ Press the PROG./CHECK button to display the timer recording programmes on the TV screen.

❹ Press the Cursor buttons (▲▼) to select the programming that you want to change.

❺ Follow the operations below to change the programmed contents.
To change the broadcasting station:
Use the Channel buttons (∨∧) Ⓑ.
To change the date of the timer recording:
Use the DATE button Ⓒ.
To change the recording starting time:
Use the ON button Ⓓ.
To change the recording ending time:
Use the OFF button Ⓔ.
To change the recording speed:
Use the SP/LP button Ⓕ.
To change the setting for PDC ON/OFF(———):
Use the PDC button Ⓖ.

Timer recording

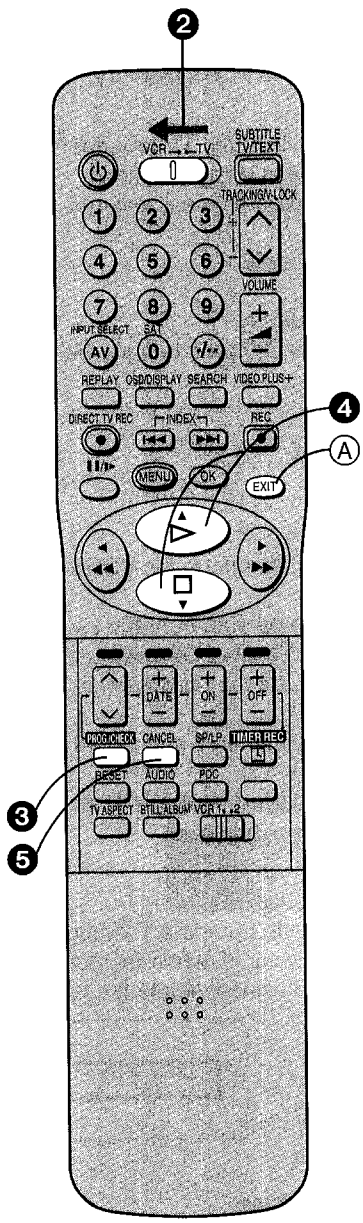
Pos Name	DATE	Start ON	Stop OFF	SP LP	PDC	Min
BBC2	27/10 We	20:00	21:30	SP	ON	90
BBC1	30/10 Sa	19:00	20:00	LP	OFF	60
SKY G	Su	21:00	22:30	SP	----	90
BBC2	Su-Sa	17:30	18:00	LP	ON	30

Menu for changing the timer recording programming(s)

❻ Press the OK button to conclude the setting.

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

Checking, Changing or Cancelling a Timer Recording Programme Continued...



◆To Cancel the Programming of a Timer Recording

It is not possible to cancel a programme while the timer recording is being performed.

❶ Display the VCR picture on the TV.

❷ Set the VCR/TV switch to "VCR".

❸ Press the PROG./CHECK button to display the timer recording programmings on the TV screen.

❹ Press the Cursor buttons (▲▼) to select the programming that you want to cancel.

❺ Press the CANCEL button.

On Screen Display

Timer recording

Pos	Name	DATE	Start ON	Stop OFF	SP LP	PDC	Min
SAT 1		27/10 We	20:00	21:30	SP	---	90
---		--/--	-- ---	--- ---	--	---	---
---		--/--	-- ---	--- ---	--	---	---

Menu when the programme to cancel is selected

Timer recording

Pos	Name	DATE	Start ON	Stop OFF	SP LP	PDC	Min
---		--/--	-- ---	--- ---	--	---	---
---		--/--	-- ---	--- ---	--	---	---
---		--/--	-- ---	--- ---	--	---	---

Menu after the programming has been cancelled

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

Notes for Cancelling the Programming of a Timer Recording:
In some cases, for example as listed below, the programming of a timer recording remains stored in the memory until 4 a.m. the next day. However, this is not a malfunction.

- When a timer recording was not performed up to the TV programme's ending time because the remaining tape time was not sufficient.
- When you have stopped the timer recording while it was being performed.

Tape Library System

This advanced system makes it quick and easy to check the contents of an inserted cassette. It can also be used to quickly find out which cassette in your collection contains a desired programme.
Whenever a cassette with an intact erasure prevention tab is inserted, the VCR first performs a brief check and then shows the number of the cassette and its contents on the On Screen Display. To start playback of the desired programme, simply select it on the On Screen Display and press the SEARCH button.

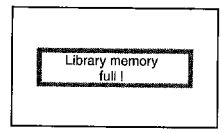
To index each recorded programme for the Tape Library System, this VCR automatically records the Library data (cassette number, title*1, name of TV station*2, recording time/date*3, category*4, etc.) and stores the data in the VCR's memory*5 when the recording is performed.

*1 In case of TV stations that broadcast with EPG (Electronic Programme Guide) information, the title of the TV programme is entered automatically. Otherwise, the name of the TV station or the programme position number is entered instead.
In case of a TV station without EPG information but with Teletext information, the title of the TV programme is entered automatically, provided the "Title page" is correctly set (see page 67).
*2 In case of a TV station with Teletext information, the name of the TV station is recorded automatically.
*3 The VCR's clock must be set correctly.
*4 In case of a TV station with EPG information, the programme category will be recorded automatically.
*5 The VCR's memory can hold a maximum of 600 programmes with titles of 8 characters (or up to 900 programmes with titles of fewer characters).

Precautions for Recording:

- We recommend that you use new tapes for recording.
- Each recorded programme should have length of at least 15 minutes.
- No Tape Library data is recorded during insert editing.
- If you copy a cassette with a cassette number, the tape library data may not be copied correctly. Therefore, the VCR's Tape Library System may not work correctly with such a copied cassette.
- When a new recording is made over existing recordings on a tape, the original programmes are deleted from the list.
- Before recording programmes, make sure that the tape length is set correctly on the On Screen Display. Otherwise, the tape position bar of the Tape Library data does not display the actual tape position. With some tapes, the bar indication is not accurate.
- The VCR's power back-up system protects the Tape Library data in the memory in case of a power failure and stores it for up to 5 years when the VCR is not connected to an AC mains socket.
- When the recording is completed and you eject the cassette, the cassette number remains displayed on the VCR display for approximately 30 seconds. Be sure to write this number on the cassette label.

- When the VCR's entire memory area has been used up by the Tape Library data, or when cassette numbers 1 through 999 have all been used, the indication "Library memory full!" appears on the TV screen for several seconds when recording is completed. After this, recording is still possible but no new Tape Library data can be stored. In this case, delete the numbers of cassettes that you do not need any more before making further recordings. (See page 51.)



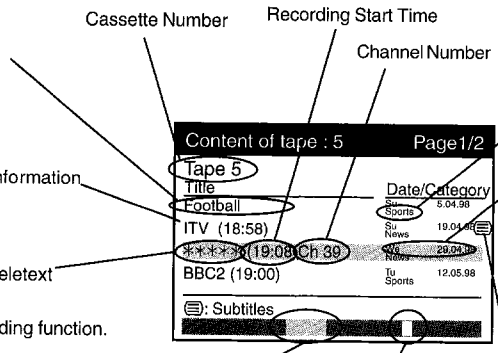
How to Read the Tape Library Contents

Title:
For a programme from a TV station that provides EPG information; also from a TV station without EPG information but with Teletext information, provided the "Title page" is correctly set (see page 67).
Manually adding or editing the title is also possible.

TV Station Name:
For a TV programme that was broadcast with Teletext information but without EPG information.

For a TV programme that was broadcast with neither Teletext information nor EPG information.

For a TV programme recorded with the Direct TV Recording function.



Category:
For a programme from a TV station that provides EPG information.
Manually adding or editing the programme category is also possible.

Recording Date

Programme Position Bar:
This shows the approximate position of the programme on the tape and its length.

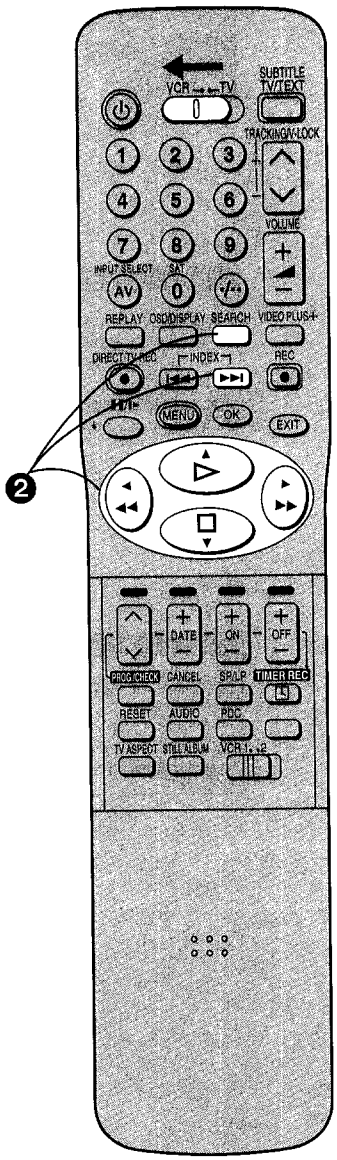
Tape Position Bar:
This shows the approximate present tape position on the inserted cassette.

Subtitle Indication:
This appears only when a programme with subtitles has been recorded. (See page 66.)
Under certain recordings conditions, this indication may not appear.

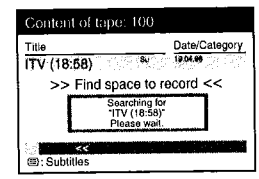
To Check What Programmes Are Recorded on the Inserted Video Cassette and To Play Back a Desired Programme

First, perform the operation steps explained on page 27.

Then press the Cursor buttons (▲▼◄►) to select the programme and then press the SEARCH button.



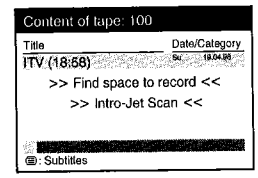
- After the selected programme has been found, the Current tape contents list disappears and playback starts automatically.
- When you select the "Find space to record" indication and press the SEARCH button, the VCR automatically winds the tape to a position from which you can start recording.
- When you select the "Intro-Jet Scan" indication and press the SEARCH button, Intro-Jet Scan starts. (See page 55.)



To Check the Cassette Number Again If the Cassette Number Check of a Cassette that Has a Cassette Number Did Not Work Correctly, or If You Cancelled the Cassette Number Check Midway:

❶ Rewind the tape to its beginning.

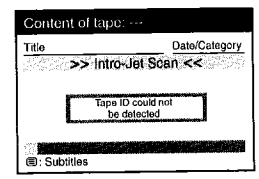
❷ Press the SEARCH button.
- The Cassette Number Check starts automatically. Wait a few moments until the check is completed. When it is completed, the cassette number and its contents (recorded programmes) appear on the On Screen Display, and the cassette number appears on the VCR display.



(Example: When Cassette Number Check was completed successfully)

If the cassette number does not appear and the following indication is displayed:

Press the INDEX►►I button once to start the search for a programme. When playback starts, wait a few moments and then press the SEARCH button.
- If the cassette number still does not appear, repeat this process until it appears.

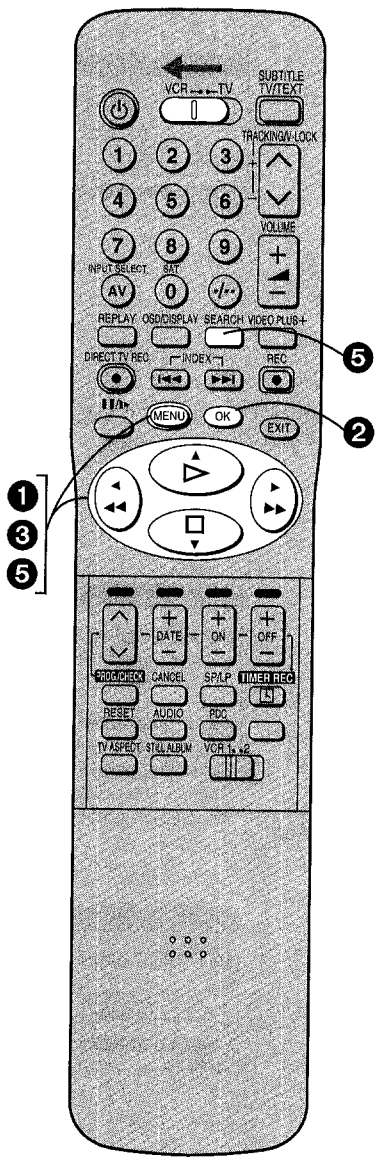


Hint:
- Even after you have selected the "Find space to record" and the VCR has located the tape position from which to make a new recording, we recommend you to confirm that this tape position is really suitable, before you start recording.

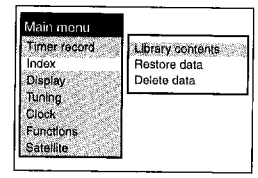
Note:
- In the case of certain cassettes, for example cassettes recorded on another NV-HD685 model VCR or cassettes whose cassette number was deleted from the Tape Library data, the cassette number and contents (recorded programmes) are not displayed.

To Check on Which Cassette a Desired Programme Is Recorded

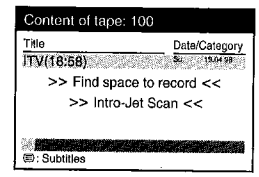
If you press the SEARCH button when no cassette is inserted, operation steps ❶ and ❷ below are not necessary. In this case, start from operation step ❸.



❶ Press the MENU button and then press the Cursor buttons (▲▼►) to select "Index" and "Library contents" in this order.

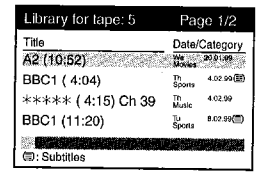


❷ Press the OK button.
- If a cassette is already inserted, its cassette number and contents appear.



- If no cassette is inserted, the lowest cassette number and its contents appear.

❸ Press the Cursor buttons (◄►) to display the contents of each cassette one after another, and search for the desired programme.

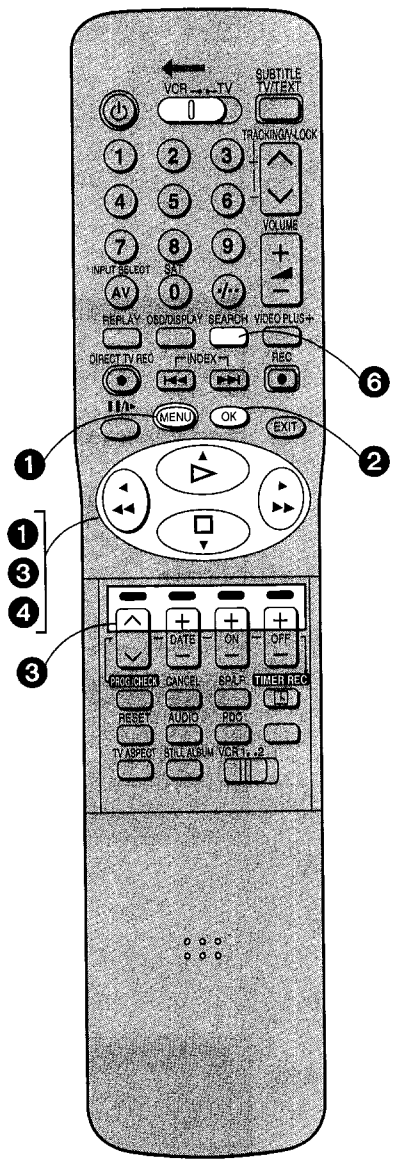


❹ After you have found out which cassette contains the desired programme, insert that cassette into the VCR. (See page 27.)

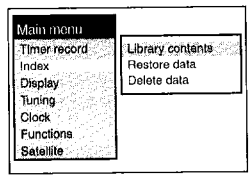
❺ To play back the desired programme, press the Cursor buttons (▲▼) to select that programme and then press the SEARCH button. (See page 47.)
- After the selected programme has been found, playback starts automatically.

To Check the Tape Library's Contents by Cassette Number, Title, Category, or Recording Date

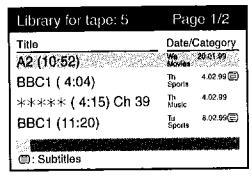
If you press the SEARCH button when no cassette is inserted, operation steps ❶ and ❷ below are not necessary. In this case, start from operation step ❸.



❶ Press the MENU button and then press the Cursor buttons (▲▼▶) to select "Index" and "Library contents" in this order.



❷ Press the OK button.



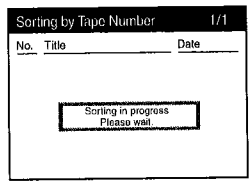
❸ Press the Channel buttons (∨∧) (red), DATE button (green), ON button (yellow) or OFF button (blue). Pressing the above buttons displays a list of the recorded programmes as follows:

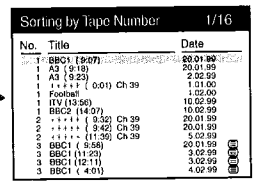
Channel (∨∧) (red):
By cassette number

DATE (green):
By title in alphabetical order.

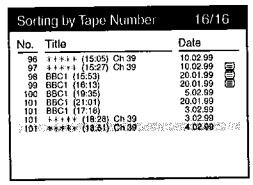
ON (yellow):
The list of categories appears.
Press the Cursor buttons (▲▼) to select the desired category and then press the OK button.
The titles are now listed in alphabetical order.

OFF (blue):
By date (latest first)





❹ Press the Cursor buttons (▲▼◀▶) to select the desired programme (title).

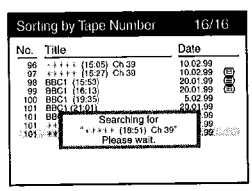


❺ To play back the desired programme, insert the corresponding cassette.
If the cassette that contains the desired programme is already in the VCR, this operation step ❺ is not necessary.

- The Cassette Number Check starts immediately and the list of programmes disappears temporarily until the check is completed.
- If the cassette number does not appear on the VCR display, see page 47.

❻ Press the SEARCH button.

- After the selected programme is found, the list of Library contents menu disappears and playback starts automatically.

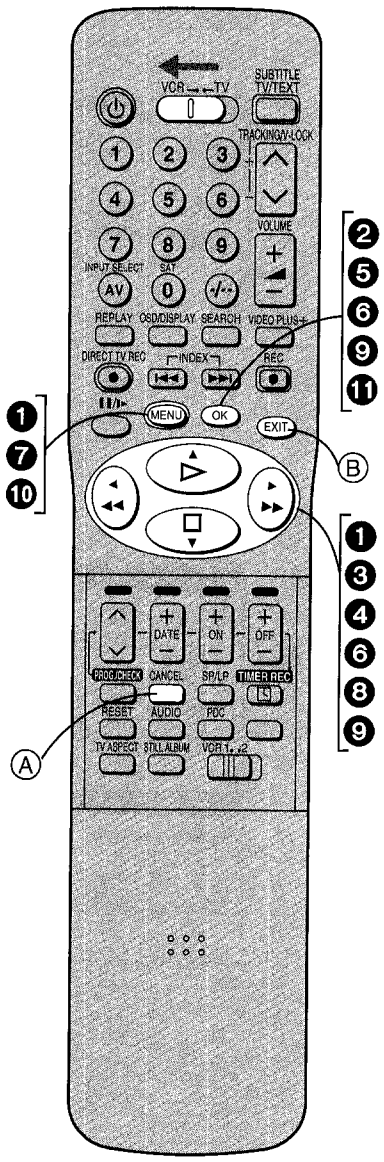


Hint:

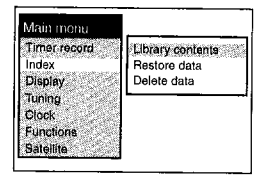
- If you press the OK button after performing operation step ❹, the menu for entering (or changing) a new title and category appears and you can enter (or edit) a new title and a category. (See page 50.)

To Manually Enter or Editing a Title or Category

If you press the SEARCH button when no cassette is inserted, operation steps ❶ and ❷ below are not necessary. In this case, start from operation step ❸.



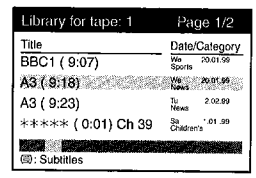
❶ Press the MENU button and then press the Cursor buttons (▲▼►) to select "Index" and "Library contents" in this order.



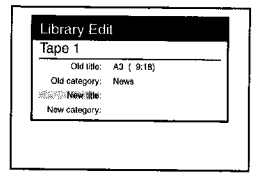
❷ Press the OK button.

❸ Press the Cursor buttons (◄►) to display the contents of each cassette one after another, and search for the programme whose title and/or category you want to enter (or change).

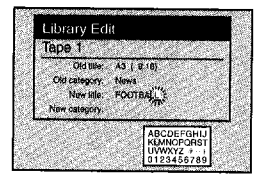
❹ Press the Cursor buttons (▲▼) to select the desired programme.



❺ Press the OK button.
- The menu for entering (or changing) the title and/or category appears.



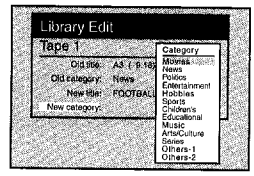
❻ Press the Cursor button (►) to select the entry field for a new title and then press the Cursor buttons (▲▼◄►) and the OK button to enter (or change) the title.
- Up to 22 characters can be entered for one title.
- To correct an input error, press the CANCEL button Ⓐ and then enter the correct character.
- If you have entered a full 22 characters, you can skip operation step ❼.

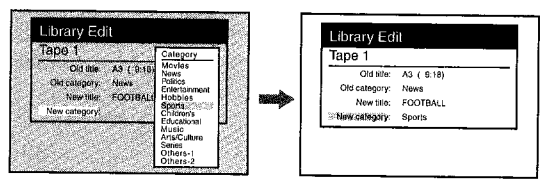


❼ After you have entered the title, press the MENU button. "New title" is now selected.

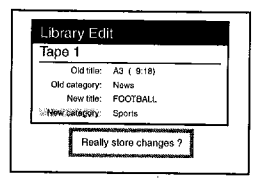
❽ Press the Cursor button (▼) to select "New category", and then press the Cursor button (►).

❾ Press the Cursor buttons (▲▼) to select the desired category and then press the OK button.

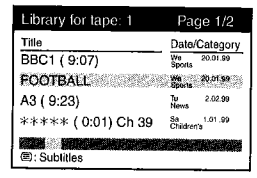




❿ Press the MENU button.



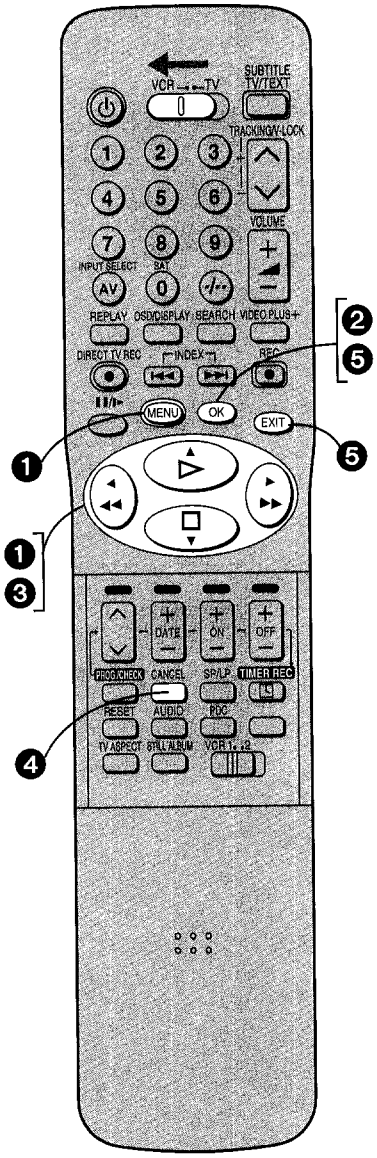
⓫ Press the OK button.
- When you enter (or change) the title, the recording start time, which was displayed before, disappears.



To Exit the On Screen Display:
Press the EXIT button Ⓑ.

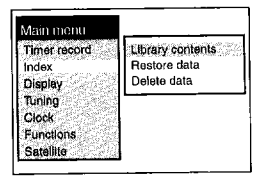
To Delete the Tape Library Data of a Single Video Cassette

Caution:
The Tape Library system offers a convenient back-up option, in case you later regret having deleted the Tape Library data. To have this option available, make sure you know on which cassette you recorded last before the deletion. If that cassette is not available, record for at least 15 minutes on any cassette. Either of these two cassettes can then be used to restore the Tape Library that you have deleted.
(To restore the Tape Library data, see page 53.)



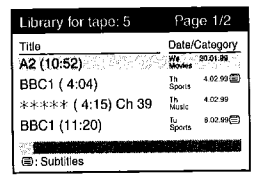
If you press the SEARCH button when no cassette is inserted, operation steps ❶ and ❷ below are not necessary. In this case, start from operation step ❸.

❶ Press the MENU button and then press the Cursor buttons (▲▼►) to select "Index" and "Library contents" in this order.

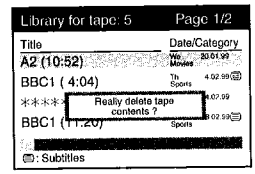


❷ Press the OK button.

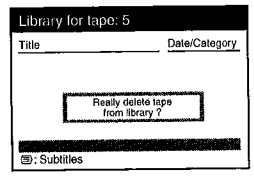
❸ Press the Cursor buttons (◄►) to search for the cassette whose Tape Library data you want to delete.



❹ When you have found the desired cassette, press the CANCEL button.



❺ If you are sure to delete the cassette's contents, press the OK button.
- The cassette's Tape Library data are now deleted from the VCR's Tape Library.
- If you also want to delete the cassette number from the VCR's Tape Library, press the OK button again to delete the cassette number.
  If you want to keep the cassette number, press the EXIT button instead of the OK button.

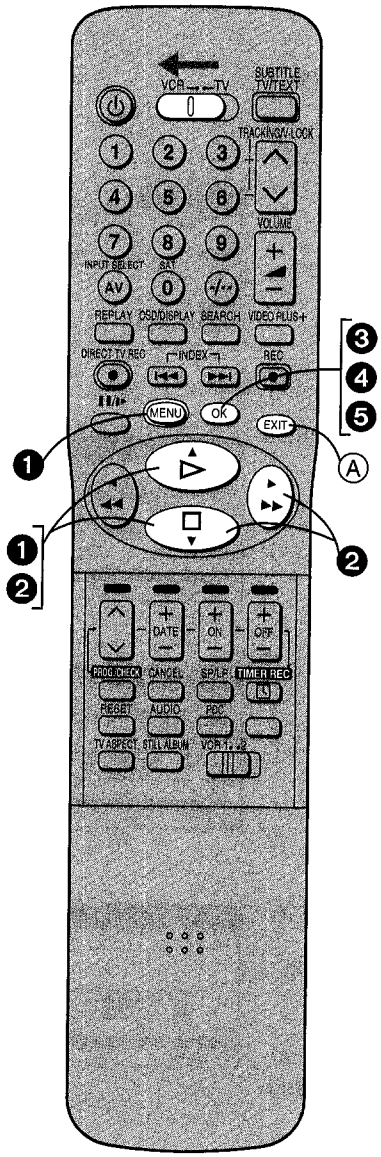


To Exit the On Screen Display:
Press the EXIT button.

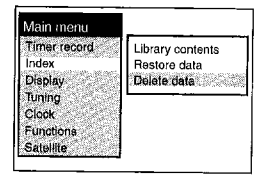
Hint:
- Even if you delete a cassette's contents from the Tape Library while that cassette is in the VCR, this does not erase the actual programmes recorded on the cassette.

To Delete All the Tape Library Data Stored in the VCR's Memory

Caution:
The Tape Library system offers a convenient back-up option, in case you later regret having deleted the Tape Library data. To have this option available, make sure you know on which cassette you recorded last before the deletion. If that cassette is not available, record for at least 15 minutes on any cassette. Either of these two cassettes can then be used to restore the Tape Library that you have deleted.
(To restore the Tape Library data, see page 53.)

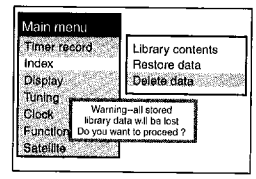


❶ Press the MENU button and then the Cursor button (▲▼) to select "Index".

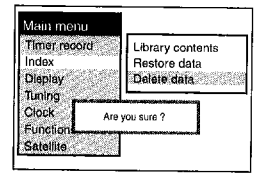


❷ Press the Cursor buttons (▶▼) to select "Delete data".

❸ Press the OK button.



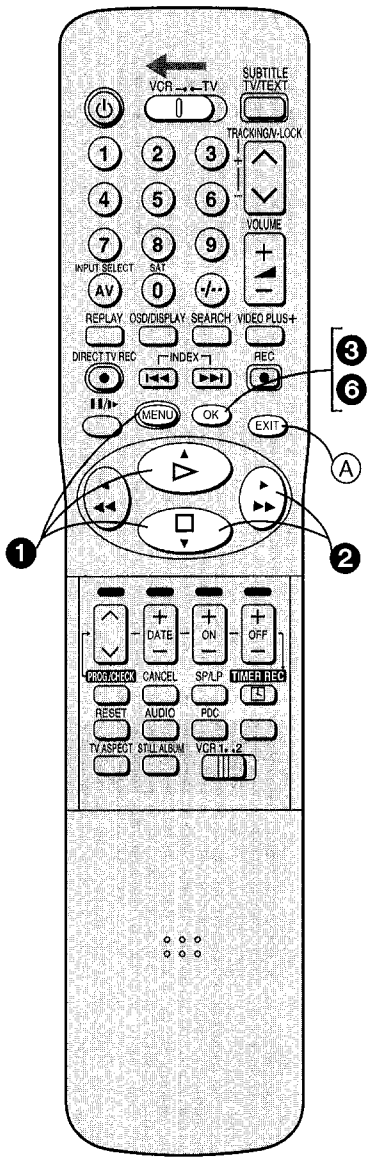
❹ Press the OK button again.



❺ Press the OK button again if you are sure that you want to delete all the stored data from the VCR's Tape Library.
- If you do not want to delete the stored data from the VCR's Tape Library after all, press the EXIT button.

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

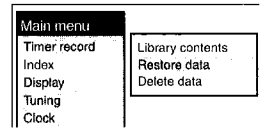
To Restore Deleted Tape Library Data



Caution:
The Tape Library system offers a convenient back-up option, in case you later regret having deleted the Tape Library data. To have this option available, make sure you know on which cassette you recorded last before the deletion. If that cassette is not available, record for at least 15 minutes on any cassette. Either of these two cassettes can then be used to restore the Tape Library that you have deleted.

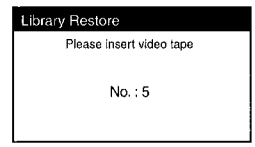
❶ Press the MENU button and then the Cursor button (▲▼) to select "Index".

❷ Press the Cursor buttons (►▼) to select "Restore data".

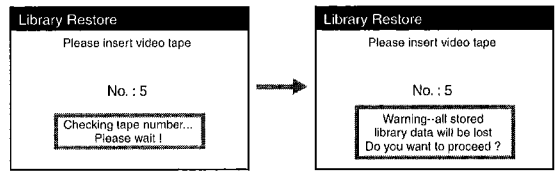


❸ Press the OK button.

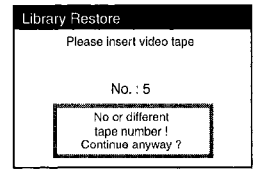
❹ The number of the cassette which you need to restore the Tape Library data appears.
- Make a note of this cassette number.



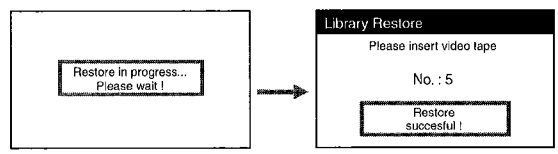
❺ Insert the cassette which has the indicated cassette number.
- The restoration of Library data now starts automatically. It takes some time for this process to be completed.



- If you insert cassette with the wrong cassette number, the following indication appears. In this case, the data cannot be completely restored, even if you continue by performing operation steps ❻.



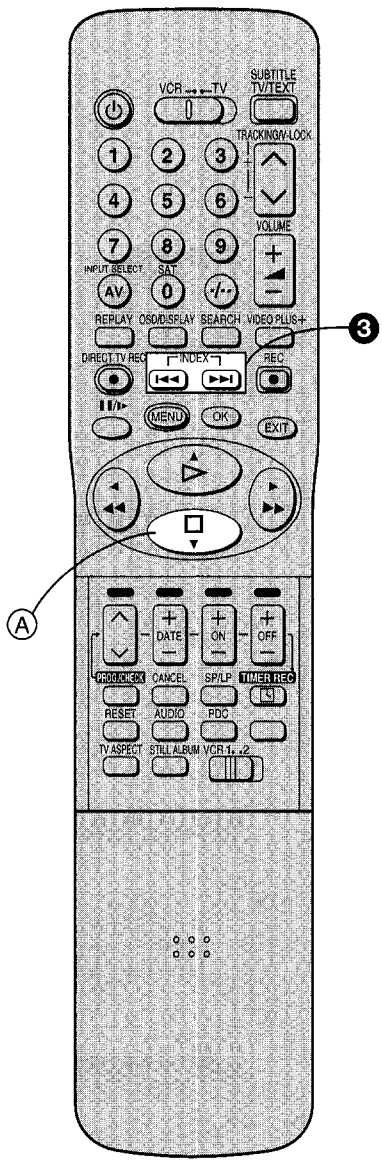
❻ Press the OK button.



To Exit the On Screen Display:
Press the EXIT button Ⓐ.

Hint:
- If you press the Stop button (□) during Library Restore, warning box appear: "Restore not succesful !"

Search Functions



To Quickly Find the Beginning of a Desired Programme (VISS: VHS Index Search System)

This VCR automatically records special index signals on the tape every time a recording is started. The Index search function makes use of these index signals to let you find the beginning of a desired programme quickly and easily.

Index signals are automatically recorded in the following cases:
- When you start a recording by pressing the REC button, REC/OTR button, or DIRECT TV REC button.
- When a timer recording starts.
- When you press the REC button on the remote control during recording.

Conditions for correct operation of the Index search function:
- The VCR must be in the stop mode or in the playback mode.
- Each programme recorded on the tape must be at least 5 minutes long.

❶ Display the VCR picture on the TV.

❷ Insert a recorded video cassette.
- As soon as the cassette is inserted, the Cassette Number Check starts. Wait a few moments until it is completed. (See page 27.)

❸ Press the INDEX button (that corresponds to the direction from the current tape position in which the desired programme is located on the tape) to start the index search. For example, if you want to search for the 2nd recorded programme in forward direction, press the INDEX ▶▶I button twice. (Read the hint at the bottom of the page.)
- The VCR fast-forwards or rewinds the tape and searches for the specified index signal (the beginning of the desired recorded programme). When it has been found, playback starts automatically.

VCR display

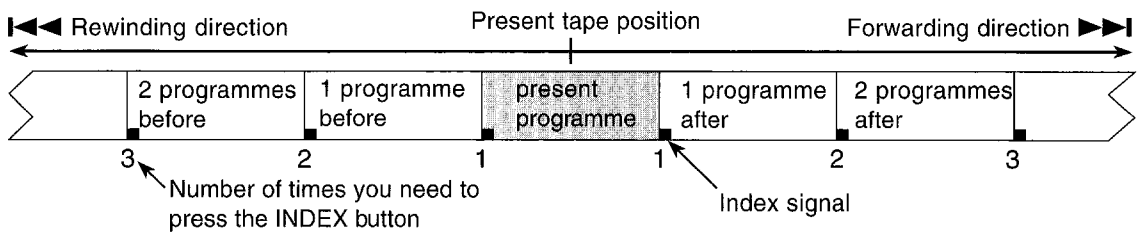
Indication when the SEARCH button has been pressed twice

To Cancel the Index Search or to Stop Playback:
Press the Stop button (□) Ⓐ.

Hints:

How to Specify the Programme that You Want to Locate and Playback

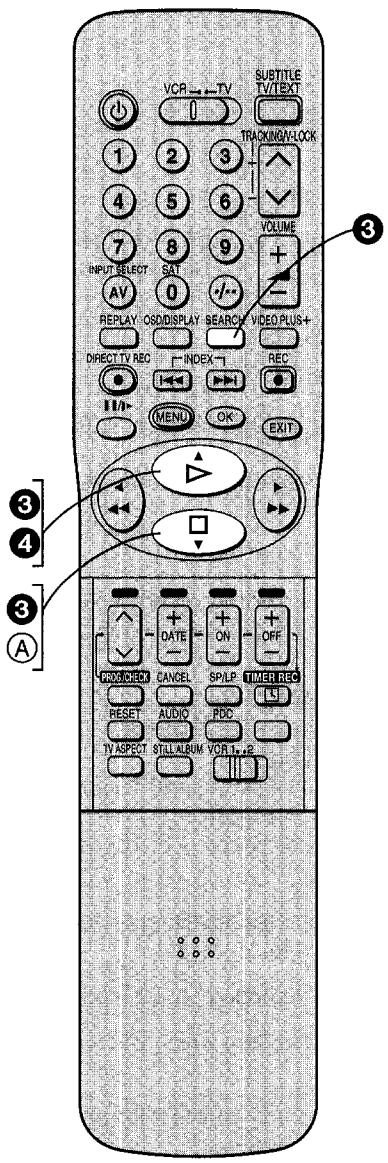
The illustration below shows the relationship between the index signal to be searched and number of times you need to press the ▶▶I or I◀◀ INDEX button.
- Searching in either direction is possible up to the 20th index signal.
- If you press either of the INDEX buttons too many times, simply press the other INDEX button (indicating the opposite direction) to correct it. In this way, you can reduce the displayed figure down to 1.
- The figure on the VCR display decreases by 1 every time an index signal is located.



Search Functions Continued...

To Search for a Desired Programme While Checking the Recorded Contents on a Cassette (Intro-Jet Scan)

This VCR automatically records special index signals on the tape every time a recording starts. The Intro-Jet Scan function makes use of these index signals to play back the beginning of each programme recorded on the cassette one after another at high speed. This lets you quickly and easily check the contents of a cassette and find a desired programme.



Index signals are automatically recorded in the following cases:

- When you start a recording by pressing the REC button, the REC/OTR button or the DIRECT TV REC button.
- When a timer recording starts.
- When you press the REC button on the remote control during recording.

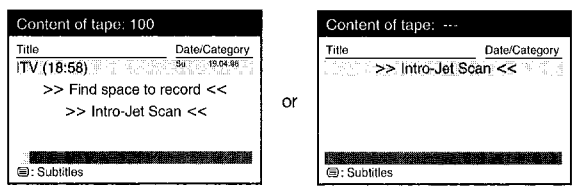
Conditions for correct operation of the Intro-Jet Scan function:

- VCR must be switched on (ON), be in the playback mode or be in the standby mode (OFF).
- Each programme recorded on the tape must be at least 15 minutes long.

❶ Display the VCR picture on the TV.

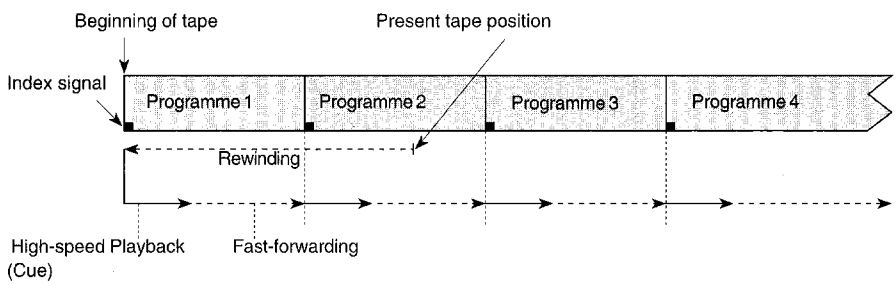
❷ Insert a recorded video cassette. If a cassette is already in the VCR, press the SEARCH button.

- As soon as the cassette is inserted, the Cassette Number Check starts. Wait a few moments until it is completed. (See page 27.)
  If the "Intro-Jet Scan" indication does not appear on the TV screen, press the SEARCH button to make it appear.



❸ Press the Cursor buttons (▲▼) to select the "Intro-Jet Scan" indication and then press the SEARCH button to start the Intro-Jet Scan.

- After rewinding the tape to the beginning, the VCR plays it back at high speed for approximately 10 seconds. It then fast-forwards the tape to the next tape position marked by an index signal (beginning of a programme), and every time an index signal is found, the VCR switches over to high-speed playback (Cue) for about 10 seconds.



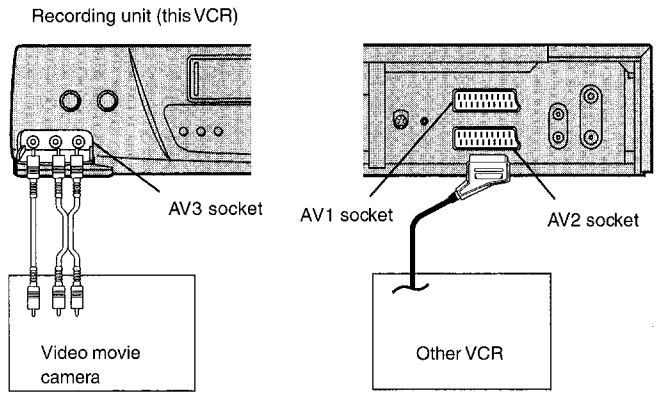
❹ When you have found the programme that you want to view, press the Play button (▷) to start normal playback.

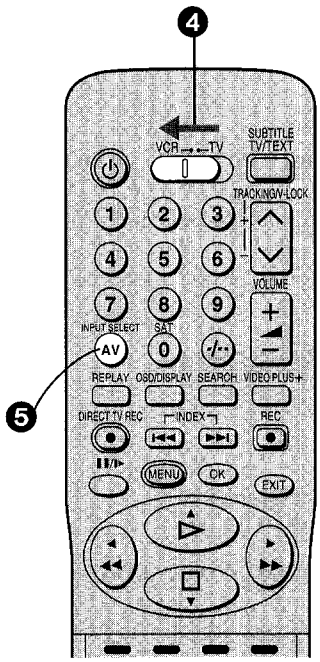
To Cancel the Intro-Jet Scan or to Stop Playback:
Press the Stop button (□) Ⓐ.

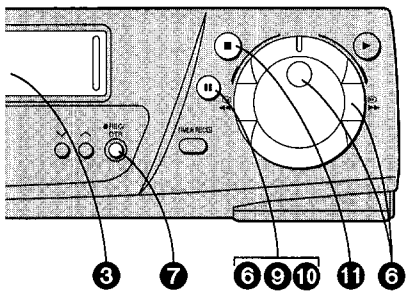
Editing with Your VCR

Assemble Editing

The assemble editing function makes it easy to record the picture and sound of virtually any number of scenes or programmes in succession.
Assemble editing from an external source, for example from a movie camera, can be performed in the same way.







❶ Connect a video movie camera or a VCR to this VCR with an audio/video cable or a 21-pin Scart cable, as shown in the illustration.

❷ Select AV input on your TV.
- If the VCR is connected to your TV via RF coaxial cable only, select the video playback channel on the TV.

❸ Insert the cassette on which the assemble editing is to be performed, and make sure that its erasure prevention tab is not broken out.
- As soon as the cassette is inserted, the Cassette Number Check starts. Wait a few moments until it is completed. (See page 27.)

❹ Set the VCR/TV switch to "VCR".

❺ Press the INPUT SELECT button to select the AV Input (external input) "A1", "A2" or "A3" according to the socket(s) on the VCR to which the source unit has been connected.

A1: When connected to the AV1 21-pin Scart socket [AV1 (TV)]
A2: When connected to the AV2 21-pin Scart socket [AV2 (DECODER/EXT)]
- Make sure that "AV2" is set to "VCR/SAT". (See page 75.)

A3: When connected to the Video Input socket [VIDEO IN (AV3)] and Audio Input sockets [AUDIO IN (AV3)] on the front panel of the this VCR
- When connecting a mono type movie camera or VCR to this VCR's front AV sockets, connect to the L (white) audio socket.

❻ Press the Pause/Still button (❚❚) on this VCR and use the Shuttle Ring or Jog Dial to search for the end of the last previously recorded scene.

❼ Press the REC/OTR button on this VCR to put it in the recording pause mode.

❽ Start playback on the source unit and search for the point from which you want to record (copy) onto this VCR.

❾ When that point is reached, press the Pause/Still button (❚❚) on this VCR again to start recording the new picture and sound from the playback unit.

❿ To record (copy) additional scenes, press the Pause/Still button (❚❚) to put this VCR in the recording pause mode and then perform above steps ❽ and ❾ again.

⓫ At the point where you want to stop recording, press the Stop button (■) to finish recording.

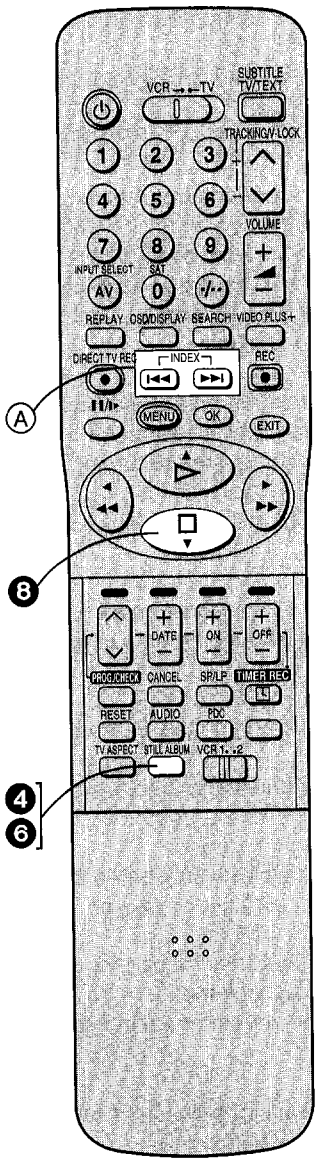
Hints:
- The new sound is recorded on both the Hi-Fi audio tracks and the normal audio track. The sound recorded on the normal audio track is always in mono.
- If you want to change the audio recording level, adjust it after performing operation step ❺. (See page 34.)

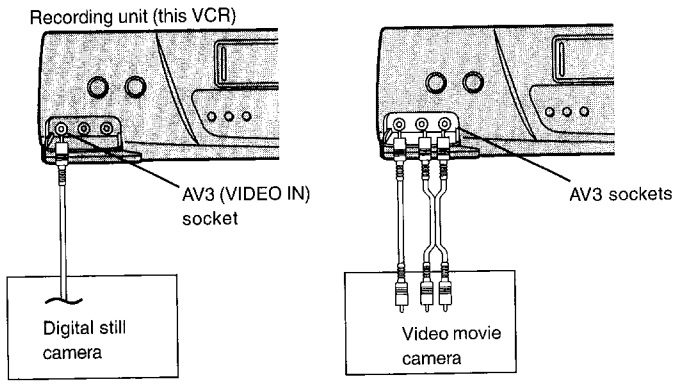
Note:
If you leave the VCR in the recording pause mode for more than 5 minutes in step ❼ or ⓾, the VCR automatically switches over to the stop mode to protect the video heads.

Editing with Your VCR Continued...

Album Function

The audio dubbing function lets you record new sound onto the normal (mono) audio track. Although this erases the original sound on the normal audio track, the sound on the Hi-Fi audio tracks and the video (picture) remains unchanged. Use this function to add narration or background music to a previously made recordings.





❶ Connect a digital still camera, a video movie camera or another external source to the Video Input socket [VIDEO IN (AV3)] and Audio Input sockets [AUDIO IN (AV3)] on the front panel of this VCR.

❷ Select AV input on your TV.
- If the VCR is connected to your TV via RF coaxial cable only, select the video playback channel on the TV.

❸ Insert a cassette with intact erasure prevention tab.
- As soon as the cassette is inserted, the Cassette Number Check starts. Wait a few moments until it is completed. (See page 27.)

❹ Press the STILL ALBUM button on the remote control to put the VCR in the recording pause mode.
- The VCR automatically selects the AV Input (external input) "A3" and then switches over to the recording pause mode. The figure for the preset recording time (seconds) appears on the VCR display. The initial setting is "05" (5 seconds).

❺ Start playback on the source unit to search for the point from which you want to copy onto this VCR.

❻ When that point is reached, press the STILL ALBUM button on the remote control of this VCR again to start recording.
The VCR records the picture (and sound) for 5 seconds and then automatically switches over to the recording pause mode.

❼ Repeat above steps ❺ and ❻ to record other scenes in succession.

❽ When you have recorded all desired scenes, press the STOP button (□) to finish recording.

To Change the Recording Time:
After step ❹ or ❻ above, press the INDEX ►►I or INDEX I◄◄ button Ⓐ to change the recording time. You can set any time between "3" and "20" seconds.

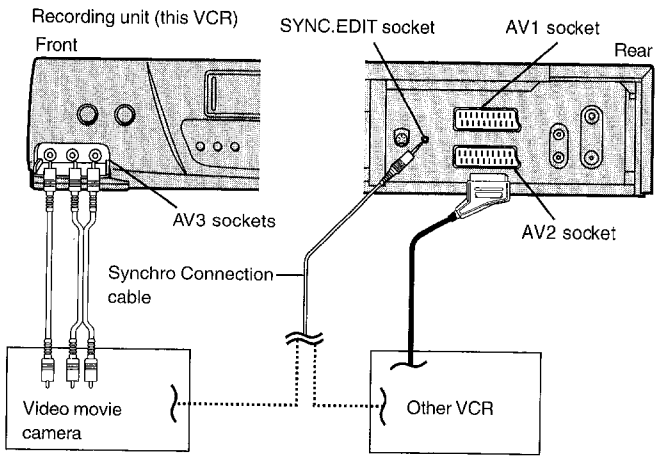
Indication when the recording time is set to "10"

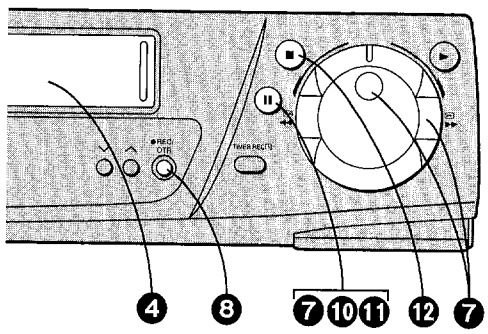
Hints:
- If you connect a digital still camera in step ❶, use a camera equipped with the video output socket. Use the cable supplied with the still camera to connect it. For details, also read the operating instructions of the equipment to be connected.
- If you want to add background music or narration to the scenes recorded with the album function, perform Audio Dubbing as explained on page 60.
- If you leave the VCR in the recording pause mode for more than 5 minutes in step ❹ or ❻, the VCR automatically switches over to the stop mode to protect the video heads. In this case, press the STILL ALBUM button again to put the VCR in the recording pause mode again.
- Depending on the output system of the digital still camera, the pictures may not be recorded correctly.

Editing with Your VCR Continued...

Synchronized Editing

This function makes editing onto this VCR from a Panasonic video movie camera or Panasonic VCR equipped with a synchro edit socket very easy and precise. Playback start (or stop) on the playback (source) unit is automatically activated when you start (or stop) recording on this VCR.





❶ Press the MENU button and then use the Cursor buttons (▲▼◄►) to select "Edit", and then set it to "OFF".
(See page 77.)

❷ Connect this VCR to a video movie camera or a VCR equipped with a synchro edit socket using an AV cable or a 21-pin Scart cable, as shown in the illustration. Also, connect the video movie camera or VCR to this VCR using the Synchro Connection Cable (VW-K10E/ VW-K1E), as shown in the illustration.
For details, also read the operating instructions of the source unit.

❸ Select AV input on your TV.
- If the VCR is connected to your TV via RF coaxial

❹ Insert the cassette onto which you want to perform synchronized editing and make sure that its erasure prevention tab is intact.
- As soon as the cassette is inserted, the Cassette Number Check starts. Wait a few moments until this check is completed. (See page 27.)

❺ Set the VCR/TV switch to "VCR".

❻ Press the INPUT SELECT button to select the AV input (external input) "A1", "A2" or "A3" according to the socket(s) to which you have connected the source unit.

A1: When connected to the AV1 21-pin Scart socket [AV1 (TV)]

A2: When connected to the AV2 21-pin Scart socket [AV2 (DECODER/EXT)]
- Make sure that "AV2" is set to "VCR/SAT". (See page 75.)

A3: When connected to the Video Input socket [VIDEO IN (AV3)] and Audio Input sockets [AUDIO IN (AV3)] on the front panel of this VCR
- When connecting a mono type movie camera or VCR to this VCR's front AV sockets, connect to the L (white) audio socket.

❼ Press the Pause/Still button (❚❚) on this VCR and then use the Shuttle Ring or Jog Dial to search for the tape position from which you want to start recording.

❽ Press the REC/OTR button on this VCR to put it in the recording pause mode.

❾ Put the source unit in the still playback mode at the point from which you want to start dubbing (copying) onto this VCR.

❿ Press the Pause/Still button (❚❚) on this VCR to start recording.
- Playback on the source unit starts automatically at the same time.

⓫ When you reach the point where you want to finish recording, press the Pause/Still button (❚❚) on this VCR again.
- This VCR is now in the recording pause mode and the source unit in the still playback mode.
- To record another scene, repeat operation steps ❾ to ⓫.

⓬ When you have finished editing, press the Stop button (■) on this VCR and on the source unit.

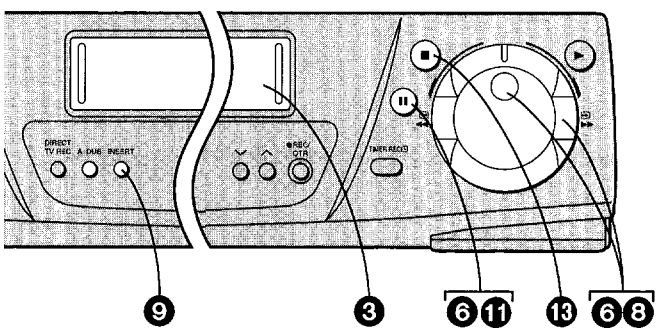
Hint:
If you want to change the audio recording level, adjust it after performing operation step ❻.
(See page 34.)

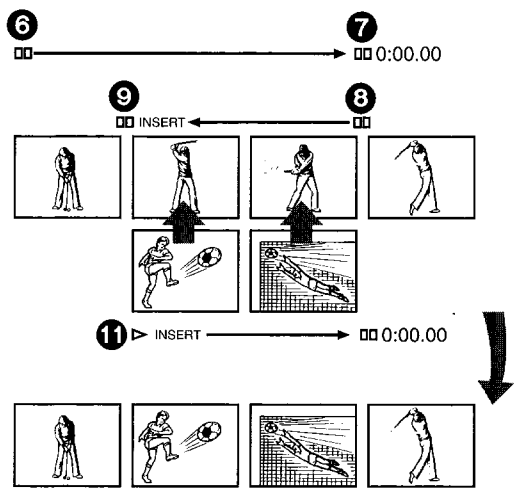
Editing with Your VCR Continued...

Insert Editing

The Insert Editing function lets you substitute a part of a previously made recording by inserting one or several new scenes together with new sound. This editing method lets you precisely set the end point, and the recording will stop automatically when this point is reached. This editing method also ensures smooth, noise-free picture transitions between old and new recordings.

As the Insert Editing function is mostly used for replacing relatively short parts of an already recorded programme, no Tape Library data is registered for the newly inserted parts.





❶ Connect a movie camera or another VCR to this VCR as shown in the illustration on page 56.

❷ Select AV input on your TV.
- If the VCR is connected to your TV via RF coaxial

❸ Insert the cassette onto which you want to perform insert editing and make sure that its erasure prevention tab is intact.
- As soon as the cassette is inserted, the Cassette Number Check starts. Wait a few moments until it is completed. (See page 27.)

❹ Set the VCR/TV switch on the remote controller to "VCR".

❺ Press the AV INPUT SELECT button to select the AV input (external input) "A1", "A2" or "A3" according to the socket(s) to which you have connected the source unit.

A1: When connected to the AV1 21-pin Scart socket [AV1 (TV)]

A2: When connected to the AV2 21-pin Scart socket [AV2 (DECODER/EXT)]
- Make sure that "AV2" is set to "VCR/SAT". (See page 75.)

A3: When connected to the Video Input socket [VIDEO IN (AV3)] and Audio Input sockets [AUDIO IN (AV3)] on the front panel of this VCR
- When connecting a mono type movie camera or VCR to this VCR's front AV sockets, connect to the L (white) audio socket.

❻ Press the Pause/Still button (❚❚) on this VCR and then use the Shuttle Ring or Jog Dial to search for the tape position at which you want the insert recording to end.

❼ Press the RESET button to reset the tape counter displayed on the VCR display to "0:00.00".

❽ Use the Shuttle Ring or Jog Dial to search for the tape position at which you want the insert editing to start.

❾ Press the INSERT button to put this VCR in the recording pause mode.
- The new sound will be recorded on the Hi-Fi sound tracks.
- If you also want to record the new sound on the normal (mono) audio track, press the A.DUB button. The indication on the On Screen Display changes to "AV INSERT".

❿ Start playback on the source unit and search for the beginning of the scene that you want to dub (copy) onto this VCR.

⓫ When you have found that point, press the Pause Still button (❚❚) on this VCR again to start recording the new part from the playback unit.
- When the tape counter displayed on the On Screen Display becomes "0:00.00", recording automatically stops and this VCR stops in the recording pause mode.
- To edit additional scenes, repeat operation steps ❻ to ⓫.

⓬ Press the Stop button (■) on this VCR to finish editing.

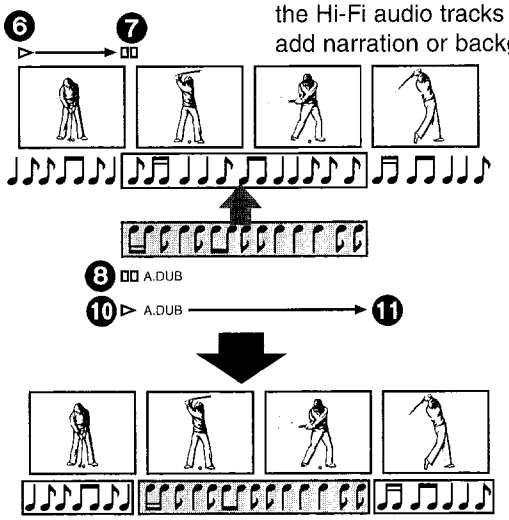
Hint:
If you want to change the audio recording level, adjust it after performing operation step ❺. (See page 34.)

Notes:
- Insert editing cannot be performed on blank sections of a tape. In such case, perform assembly editing first. (See page 56.)
- The cassette number is not recorded for the programme which has been recorded with Insert Editing.

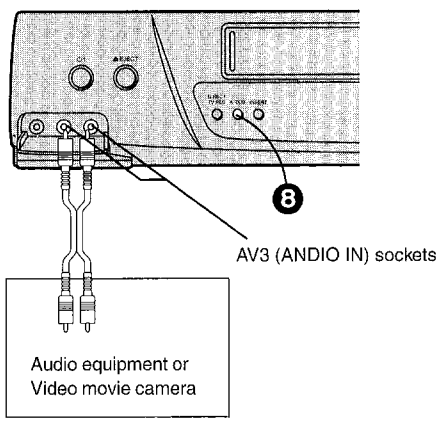
Editing with Your VCR Continued...

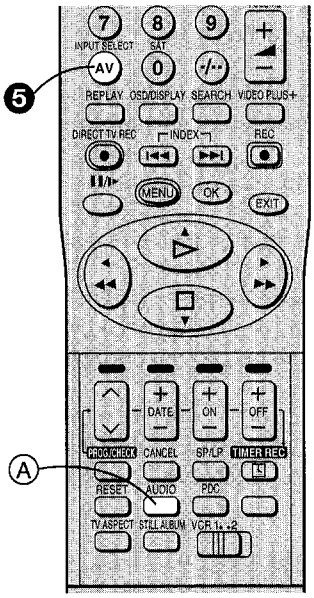
Audio Dubbing

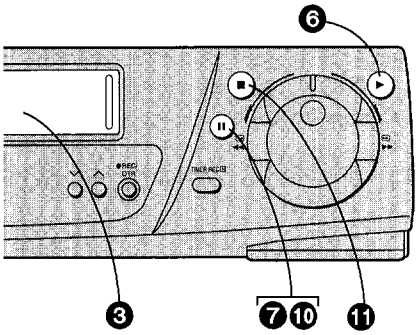
The audio dubbing function lets you record new sound onto the normal (mono) audio track. Although this erases the original sound on the normal audio track, the sound on the Hi-Fi audio tracks and the video (picture) remains unchanged. Use this function to add narration or background music to a previously made recordings.



Example: Connection to the AV3 Input sockets







❶ Connect the audio equipment or a video movie camera to this VCR with audio cables.

❷ Select AV input on your TV.
- If the VCR is connected to your TV via RF coaxial cable only, select the video playback channel on the TV.

❸ Insert the cassette on which the audio dubbing is to be performed, and make sure that its erasure prevention tab is not broken out.
- As soon as the cassette is inserted, the Cassette Number Check starts. Wait a few moments until it is completed. (See page 27.)

❹ Set the VCR/TV switch to "VCR".

❺ Press the INPUT SELECT button to select the AV Input (external input) "A1", "A2" or "A3" according to the socket(s) on the VCR to which you have connected the source unit.

A1: When connected to the AV1 21-pin Scart socket [AV1 (TV)]
A2: When connected to the AV2 21-pin Scart socket [AV2 (DECODER/EXT)]
- Make sure that "AV2" is set to "VCR/SAT". (See page 75.)

A3: When connected to the Audio Input sockets [AUDIO IN (AV3)] on the front panel of this VCR
- When connecting a mono type movie camera or VCR to this VCR's front AV sockets, connect to the L (white) audio socket.

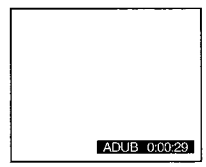
❻ Press the Play button (▶) on this VCR to start playback to search for the point from which you want to start audio dubbing.

❼ At the point from which you want to perform audio dubbing, press the Pause/Still button (❚❚) on this VCR to put it in the still playback mode.

❽ Press the A.DUB button on this VCR to put it in the recording pause mode.

❾ Start playback on the source unit so that you can hear the sound.

❿ When you reach the point from which you want to start audio dubbing,press the Pause/Still button (❚❚) button on this VCR again to start recording the new sound or start your narration.



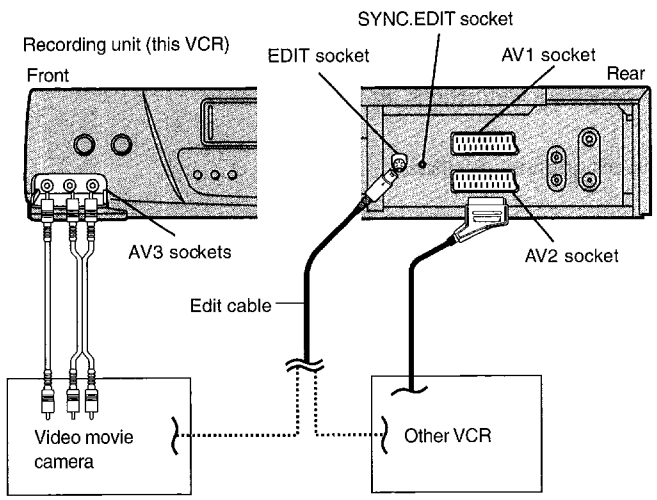
⓫ At the point where you want to stop audio dubbing, press the STOP button (■) to finish recording.

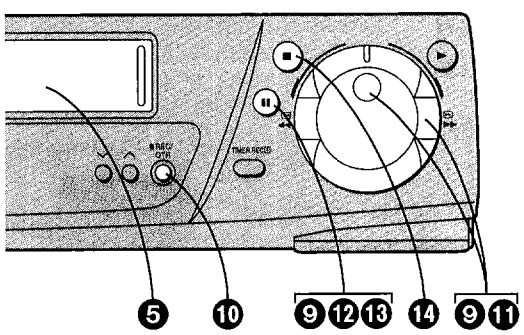
Hints:
- The new sound is recorded on the normal audio track. The original sound remains on the Hi-Fi audio tracks. The sound recorded on the normal audio track is always in mono.
- For audio dubbing with narration, you can use the built-in microphone of the connected video movie camera.
- If you want to change the audio recording level, adjust it after performing operation step ❺. (See page 34.)
- To listen to the sound recorded with audio dubbing, press the AUDIO button Ⓐ during playback to select the normal audio track. (For details, refer to page 30.)
- To listen to the sound recorded with audio dubbing together with the original sound, first set "Audio mode" to "MIX" (for details, refer to page 77).

Editing with Your VCR Continued...

One-Touch Editing

This editing function makes it very easy to perform repeated assemble editing,insert editing or audio dubbing as the connected source unit can also be controlled with this VCR's Shuttle Ring and Jog Dial.





❶ First confirm that both recording and source units are connected to a AC mains socket.

❷ Press the MENU button and then use the Cursor buttons (▲▼◀▶) to select "Functions" followed by "Edit", and then set it to "ON". (See page 77.)
- If the source unit also has an "Edit" setting (either a switch or a menu setting), be sure to set it to "OFF" on the source unit.

❸ Connect the EDIT socket on this VCR to a video movie camera or a VCR using the Edit cable (VW-K5E), as shown in the illustration.
- If you want to edit from a Video-8/Hi8 video movie camera or VCR equipped with a LANC socket, connect the LANC type edit cable to the SYNC.EDIT socket on this VCR. Also refer to the operating instructions of the source unit.

❷ Select AV input on your TV.
- If the VCR is connected to your TV via RF coaxial

❺ Insert the cassette onto which you want to perform One-Touch editing and make sure that its erasure prevention tab is intact.
- As soon as the cassette is inserted, the Cassette Number Check starts. Wait a few moments until this check is completed. (See page 27.)

❻ Insert the cassette, from which you want to perform editing, into the source unit.

❼ Set the VCR/TV switch to "VCR".

❽ Press the INPUT SELECT button to select the AV input (external input) "A1", "A2" or "A3" according to the socket(s) to which you have connected the source unit.
A1: When connected to the AV1 21-pin Scart socket [AV1 (TV)]
A2: When connected to the AV2 21-pin Scart socket [AV2 (DECODER/EXT)]
- Make sure that "AV2" is set to "VCR/SAT". (See page 75.)

A3: When connected to the Video Input socket [VIDEO IN (AV3)] and Audio Input sockets [AUDIO IN (AV3)] on the front panel of this VCR
- When connecting a mono type movie camera or VCR to this VCR's front AV sockets, connect to the L (white) audio socket.

❾ Press the Pause/Still button (❚❚) on this VCR and then use the Shuttle Ring or Jog Dial to search for the tape position from which you want to start recording.

❿ Press the REC/OTR button on this VCR to put it in the recording pause mode.
- This automatically puts the source unit in the still playback mode.
- Instead of the REC/OTR button, press the INSERT button to perform insert editing, or the A.DUB button for audio dubbing, or the INSERT and A.DUB buttons simultaneously for AV insert editing.

⓫ Use the Shuttle Ring and the Jog Dial on this VCR to search for point in the picture from the source unit from which you want to start recording.

⓬ Press the Pause/Still button (❚❚) on this VCR to start editing.
- Playback on the source unit starts automatically at the same time.

⓭ When you reach the point in the picture from the source unit where you want to finish recording, press the Pause/Still button (❚❚) on this VCR again.
- This VCR is now in the recording pause mode and the source unit in the still playback mode.
- To edit another scene, repeat operation steps ⓫ to ⓭.

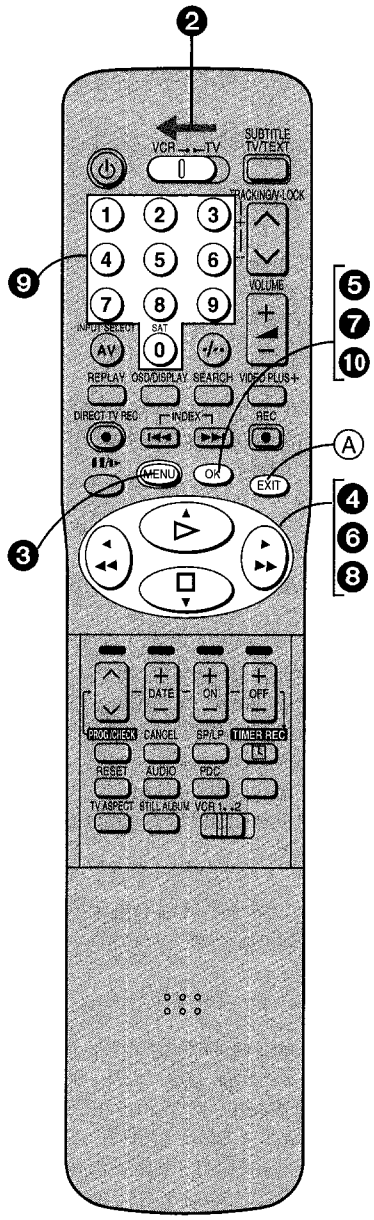
⓮ Press the Stop button (■) on this VCR to finish editing.
- After you have finished editing, disconnect the Edit cable.

Hint:
- If you want to change the audio recording level, adjust it after performing operation step ❽. (See page 34.)
- If you connect the optional Editing Controller (VW-EC500E/EC310E/EC300E) to the EDIT socket, such editing functions as assemble editing, insert editing and audio dubbing can be performed more quickly and efficiently between this VCR and another VCR or a movie camera.

Manual Tuning

This VCR has 99 programme positions that can be preset to receive TV stations.
Usually, if you switch the VCR on for the first time after making the necessary connections, the VCR will start the Download or Auto Setup function automatically so that all available TV stations in the area can be received.
However, if Auto Setup is not successful due to extraordinary transmission circumstances, or if you want to change the name of a TV station or change a TV station from its regular programme position to one of your preference, you can set it up manually. This is called Manual Tuning.
If download is performed after you have used manual tuning to change the settings then the changes that you made may be lost. In this case make the changes again using manual tuning. However for Direct TV Record to work correctly (Q Link) then the programme settings of the TV and VCR must be the same. To ensure this, make the desired programme setting changes to the TV first and then perform download to the VCR. Refer to the TV operating instructions for further details.

Manual Tuning can be used for the following:
① To change the order in which the TV stations are assigned to the programme positions
② To enter or change the name of a TV station
③ To enter newly available TV stations
④ To select the type of sound to be heard/recorded
⑤ To change the Subtitle Teletext Page Number (Subtitles)
⑥ To change the title Teletext page number (Title page)
⑦ Making changes to the programme list (stored on the programme positions of the VCR)
- To delete a programme position
- To insert a blank programme position
- To move a TV station to another programme position



① To Change the Order in Which the TV Stations Are Assigned to the Programme Positions

❶ Display the VCR picture on the TV.

❷ Set the VCR/TV switch to "VCR".

❸ Press the MENU button to display the Main menu on the TV screen.

❹ Press the Cursor buttons (▲▼◀▶) to select "Tuning" and "Manual" in this order.

❺ Press the OK button to display the list of tuned TV stations.

❻ Press the Cursor buttons (▲▼◀▶) to select the TV station that you want to assign to a different programme position.

❼ Press the OK button to display the Manual Tuning menu.

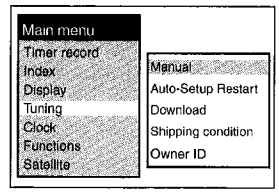
❽ Press the Cursor buttons (▲▼◀▶) to select the entry field for "Pos:".

❾ Press the Numeric buttons to enter the number of the desired programme position.

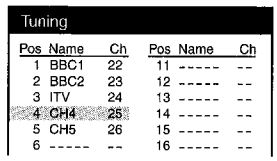
❿ Press the OK button to conclude the setting.

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

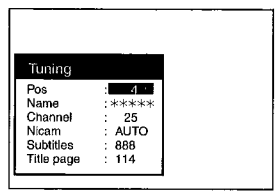
On Screen Display



Indication when Manual is selected

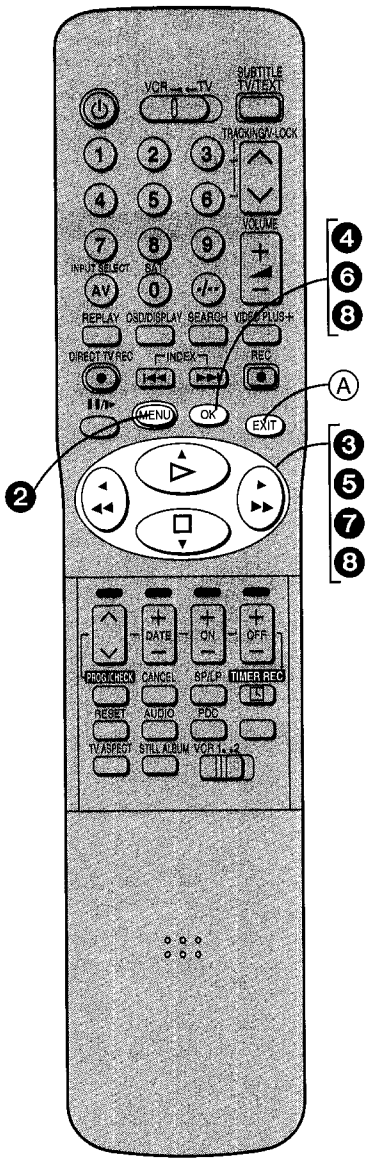


List of tuned TV stations



Manual Tuning menu

Manual Tuning Continued...



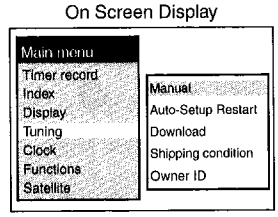
② To Enter or Change the Name of a TV Station

❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

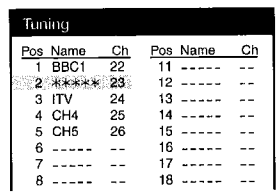
❸ Press the Cursor buttons (▲▼◀▶) to select "Tuning" and "Manual" in this order.

On Screen Display



Indication when Manual is selected

❹ Press the OK button to display the list of tuned TV stations.



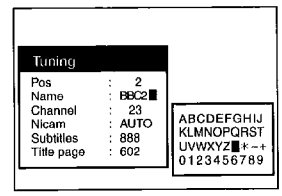
List of tuned TV stations

❺ Press the Cursor buttons (▲▼◀▶) to select a programme position whose TV station name is indicated as ＊＊＊＊＊.

❻ Press the OK button to display the Manual Tuning menu.

❼ Press the Cursor buttons (▲▼◀▶) to select the entry field for "Name:".
- The character list appears.

❽ Use the Cursor buttons (▲▼◀▶) and OK button to enter the station name.
- If the station name needs a blank space, select the blank between "Z" and "＊".

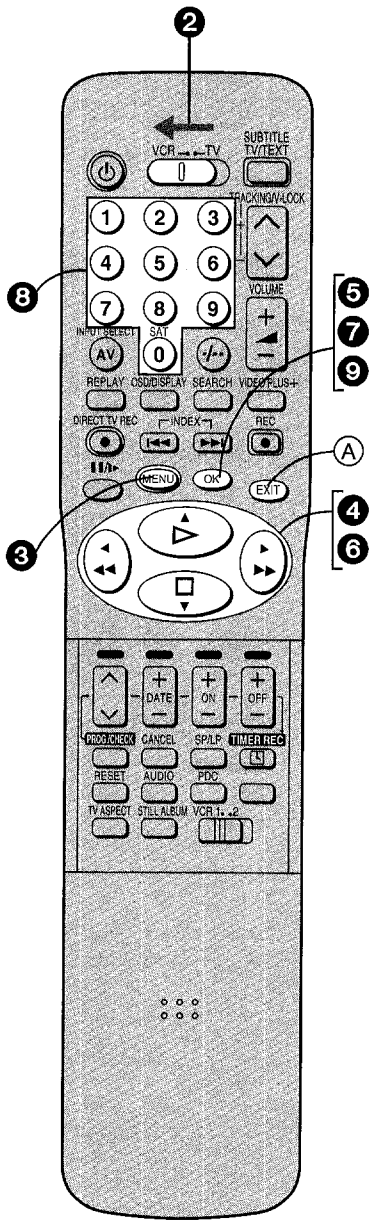


Manual Tuning menu (when the character list is displayed)

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

Hint:
- If you want to abort the entering or changing of the TV station name in step ❽ above, press the EXIT button. However, as the characters that you have entered are stored as the station name, be sure to enter the correct name.

Manual Tuning Continued...



③ To Enter Newly Available TV Stations

❶ Display the VCR picture on the TV.

❷ Set the VCR/TV switch to "VCR".

❸ Press the MENU button to display the Main menu on the TV screen.

❹ Press the Cursor buttons (▲▼◄►) to select "Tuning" and "Manual" in this order.

❺ Press the OK button to display the list of tuned TV stations.

❻ Press the Cursor buttons (▲▼◄►) to select an unused programme position.

❼ Press the OK button to display the Manual Tuning menu.
- "21" is selected for the item "Channel".

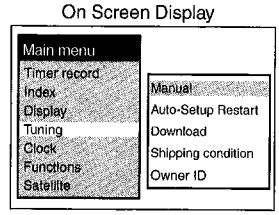
❽ Press the Numeric buttons to enter the channel number of the desired TV station.
Wait a few moments until the desired TV station has been tuned.

❾ Press the OK button to conclude the setting.

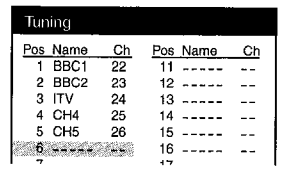
To Exit the On Screen Display:
Press the EXIT button Ⓐ.

To Change the Channel Number of an Already Tuned TV Station:
You can change it in the same way as explained above. However, in step ❻ select the programme position of the TV station that you want to change to another channel number, and after pressing the OK button in step ❼, use the Cursor buttons (▲▼◄►) to select the entry field for "Channel".

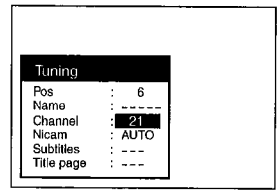
On Screen Display



Indication when Manual is selected

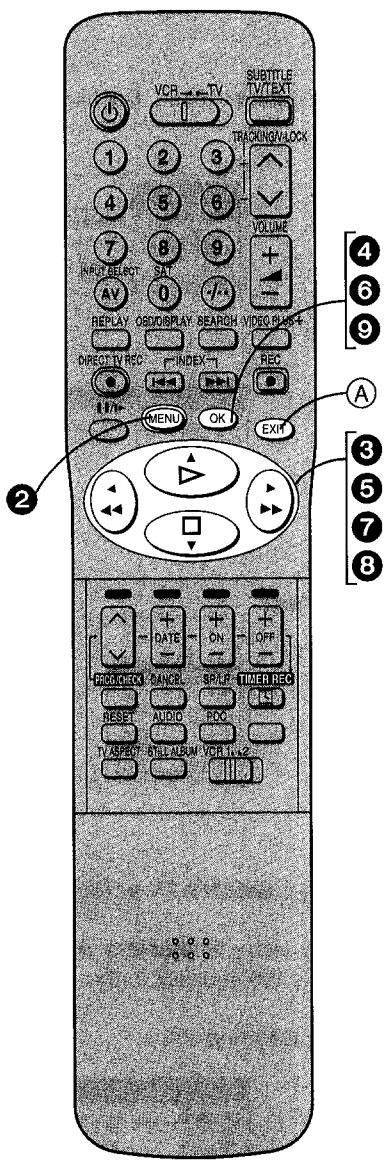


List of tuned TV stations



Manual Tuning menu

Manual Tuning Continued...



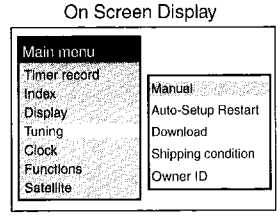
④ To Select the Type of Sound to Be Heard/Recorded

❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◀▶) to select "Tuning" and "Manual" in this order.

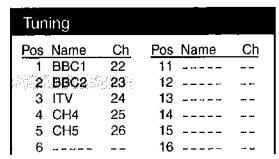
On Screen Display



Indication when Manual is selected

❹ Press the OK button to display the list of tuned TV stations.

❺ Press the Cursor buttons (▲▼◀▶) to select the desired TV station.

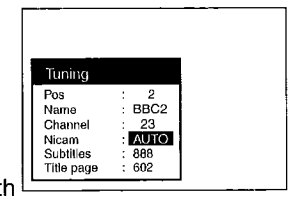


List of tuned TV stations

❻ Press the OK button to display the Manual Tuning menu.

❼ Press the Cursor buttons (▲▼◀▶) to select the entry field for "Nicam".

❽ Press the Cursor buttons (▲▼) to select AUTO.
- When you record a programme which is broadcast with NICAM sound, the NICAM sound is automatically recorded.
- Select "OFF" if you want to record the normal (mono) sound on the Hi-Fi audio tracks during a NICAM broadcast, or if the sound is distorted due to inferior NICAM reception conditions.

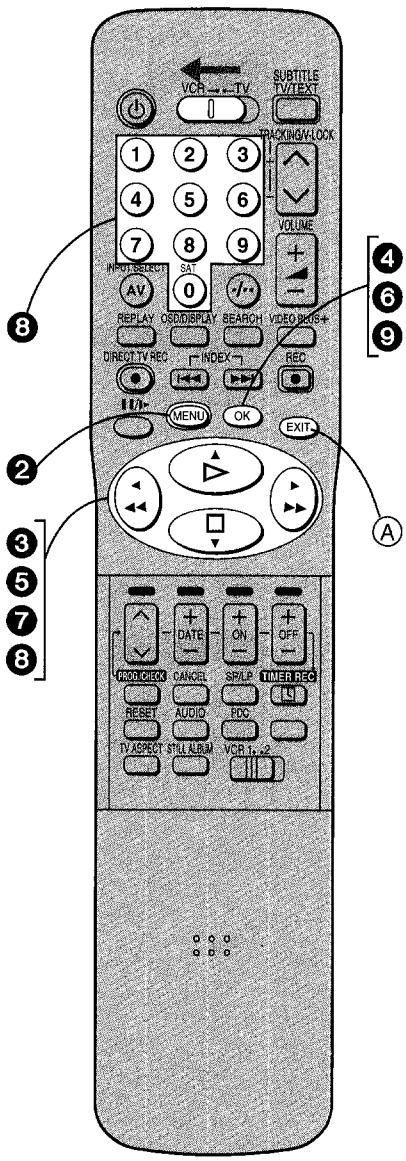


Manual Tuning menu

❾ Press the OK button to conclude the setting.

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

Manual Tuning Continued...



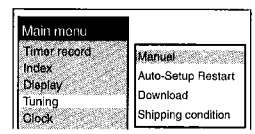
⑤ To Change the Subtitle Teletext Page Number (Subtitles)

TV stations broadcast subtitles for certain programmes on special subtitle Teletext pages. This VCR automatically selects the correct subtitle Teletext page number of each terrestrial TV station. However, TV stations may change this Teletext page number for technical reasons. In such a case, you need to change the setting for the subtitle Teletext page to the new number as explained below, otherwise recording the subtitles and displaying them on the screen is not possible.
If a satellite receiver or a decoder is connected to the VCR, the subtitle Teletext page number must be entered manually before recording a satellite TV programme, as explained at the bottom of this page.

Preparation
From the Teletext service on your TV, make note of the page number of the "Subtitle" service for the required broadcaster, e.g. BBC1, ITV,—etc.

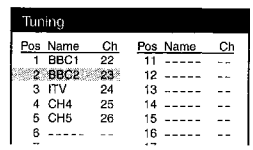
❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.



❸ Press the Cursor buttons (▲▼◀▶) to select "Tuning" and "Manual" in this order.

❹ Press the OK button to display the list of tuned TV stations.

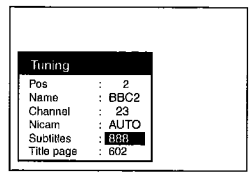


❺ Press the Cursor buttons (▲▼◀▶) to select the TV station whose subtitle Teletext page number you want to change.

❻ Press the OK button to display the Tuning menu.

❼ Press the Cursor buttons (▲▼◀▶) to select the entry field for "Subtitles".

❽ Press the Numeric buttons or the Cursor buttons (▲▼) to select the correct Teletext Page number.

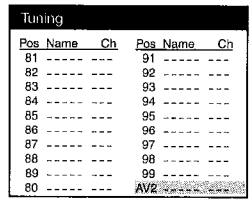


❾ Press the OK button to conclude the setting.

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

To Set the Subtitle Teletext Page Number When Recording a Satellite TV or Pay-TV Programme:
The subtitle Teletext page number must be entered manually every time before you record a satellite or pay-TV programme, if you want to include the subtitles in the recording.
After performing operation steps ❶ to ❹ above, perform the following steps:

❺ If the satellite receiver (or decoder) is connected via 21-pin Scart cable:
Press the Cursor buttons (▲▼◀▶) to select AV2.
If the satellite receiver is connected via RF coaxial cable:
Press the Cursor buttons (▲▼◀▶) to select the desired TV station.

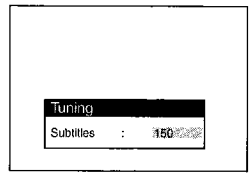


❻ Press the OK button to display the Tuning menu.

❼ Press the Cursor buttons (▲▼◀▶) to select the entry field for "Subtitles".
- This step is not necessary, if the satelllite receiver (or decoder) is connected via 21-pin Scart cable.

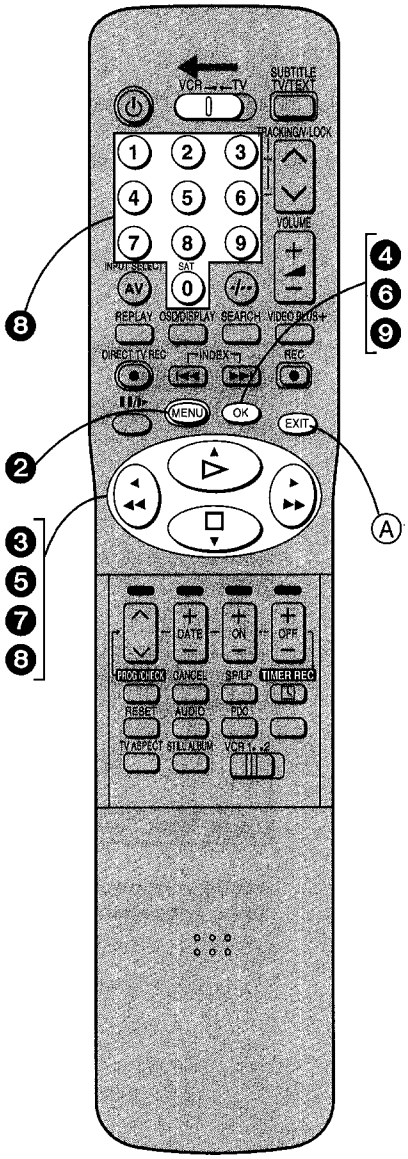
❽ Press the Numeric buttons or the Cursor buttons (▲▼◀▶) to select the correct teletext page.

❾ Press the OK button to conclude the setting.



To Exit the On Screen Display:
Press the EXIT button Ⓐ.

Manual Tuning Continued...



⑥ To Change the title Teletext page number (Title page)

When recording a programme from your television, this video recorder has the capability to also record the TITLE of the programme. This means that you will easily be able to identify which programmes are recorded on the tape for future reference. This is achieved by using information currently provided by the Broadcasters on the "Title page" Programme guide pages of the Teletext service.

Currently this information is transmitted by the broadcasters on the following Teletext page numbers:
BBC1 (page 601), BBC2 (page 602), ITV (page 113), Channel 4 (page 114) and Channel 5 (page 125).

These page numbers are pre-set on the VCR at production. Should broadcasters change the page numbers of this service, you can change the corresponding page numbers on the VCR by following the instructions below (see steps ❶ to ❾).

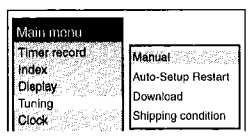
The VCR relies on the accuracy of the information provided by the broadcasters. Should this information for any reason be inaccurate or should the broadcasters change the detail of the information provided, this may result in incorrect programme titles being recorded. Should this occur, it is possible to change the titles manually by following the instructions on page 50.
This is not a VCR malfunction.

In some cases a programme title may begin with the station name e.g. BBC1/BBC2/ITV etc. In this instance the VCR may only record the details of the station name and not the full title of the programme. Should this occur, it is possible to change the titles manually by following the instructions on page 50.
This is not a VCR malfunction.

Preparation
From the Teletext service on your TV, make note of the page number of the "Title page" service for the required broadcaster, e.g. BBC1, ITV,—etc.

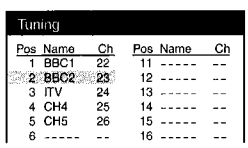
❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.



❸ Press the Cursor buttons (▲▼◀▶) to select "Tuning" and "Manual" in this order.

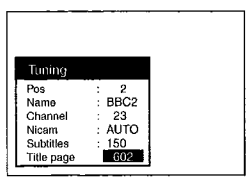
❹ Press the OK button to display the list of tuned TV stations.



❺ Press the Cursor buttons (▲▼◀▶) to select the TV station whose title Teletext Page number you want to change.

❻ Press the OK button to display the Tuning menu.

❼ Press the Cursor buttons (▲▼◀▶) to select the entry field for "Title page".



❽ Press the Numeric buttons or the Cursor buttons (▲▼) to select the correct Teletext Page.

❾ Press the OK button to conclude the setting.

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

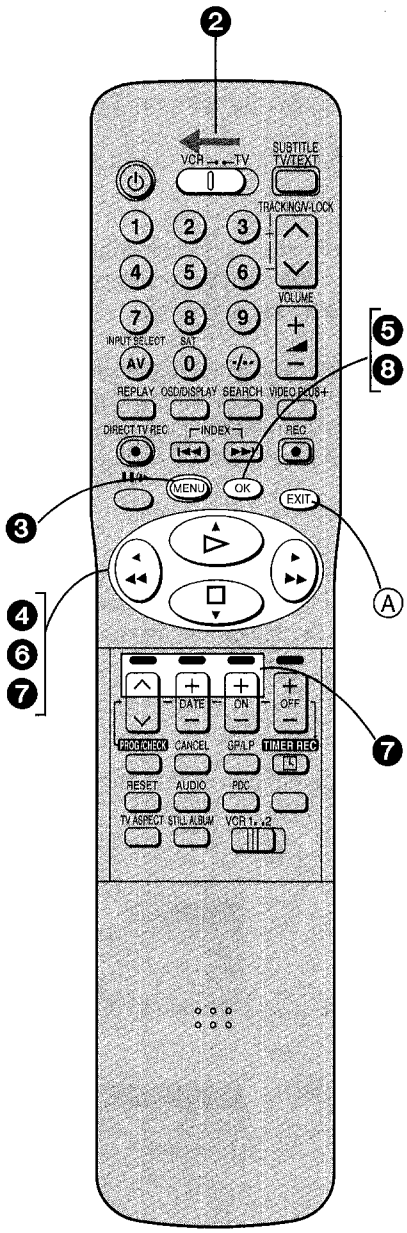
Note:
- If the start time of a TV programme is not listed on the left side of the title page of the Teletext page, its title cannot automatically be entered into the Tape Library.

Manual Tuning Continued...

⑦ Making changes to the programme list (stored on the programme positions of the VCR)

- To delete a programme position
- To insert a blank programme position
- To move a TV station to another programme position

Use the coloured instruction indications displayed below the list of tuned TV stations and the corresponding coloured buttons.
If downloading of the setup data has been performed, only the instruction indication "Delete" appears.



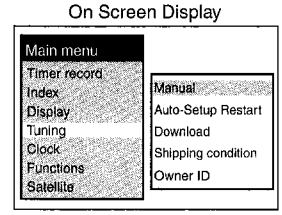
❶ Display the VCR picture on the TV.

❷ Set the VCR/TV switch to "VCR".

❸ Press the MENU button to display the Main menu on the TV screen.

❹ Press the Cursor buttons (▲▼◀▶) to select "Tuning" and "Manual" in this order.

On Screen Display

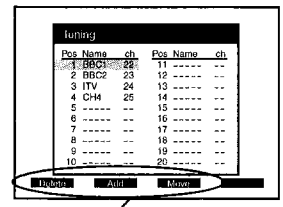


Indication when Manual is selected

❺ Press the OK button to display the list of tuned TV stations.

❻ Press the Cursor buttons (▲▼◀▶) to select the desired TV station.

❼ Follow the operations below.
To delete a programme position (Delete):
Press the Channel button (∧, red).
To insert a blank programme position (Add):
Press the Date button (+, green).
To move a TV station to another programme position:
Press the ON button (+, yellow),
and then use the Cursor buttons (▲▼)
to select the new programme position to
which you want to assign the TV station.



Instruction indications for Delete, Add and Move

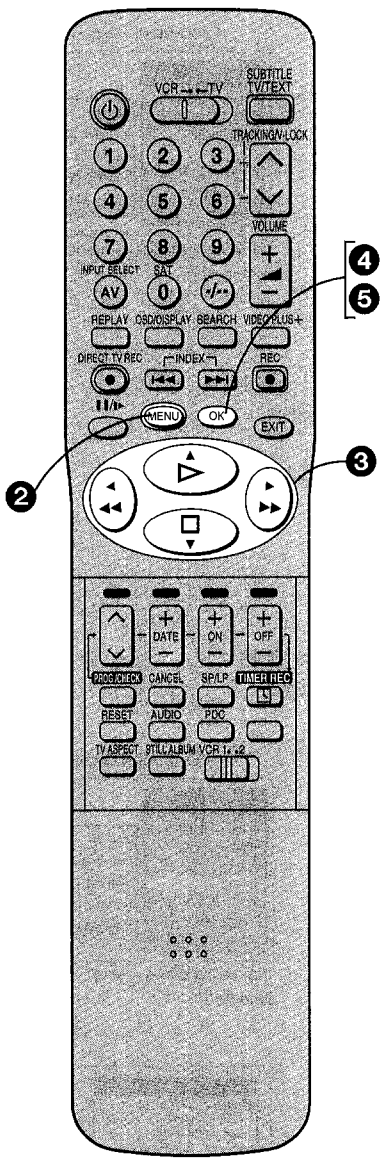
❽ Press the OK button to conclude the setting.

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

Hint:
- If you have performed Manual Tuning to enter TV stations, the "– –" indication may appear under "Pos/Name" on the On Screen Display when programming a Video Plus+ timer recording.

Restarting the Auto Setup or Download (Q Link)

Performing Auto Setup or Download (Q Link) automatically tunes all TV stations available in your area for the VCR. Restarting this function is convenient when you move to another area and may need to set up the VCR again.



◆ To Restart the Auto Setup

To perform the Auto Setup again, follow the operation steps below.

❶ Display the VCR picture on the TV.

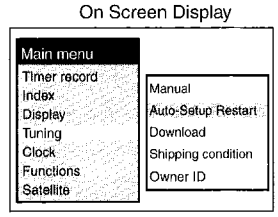
❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◄►) to select "Tuning" and "Auto-Setup Restart" in this order.

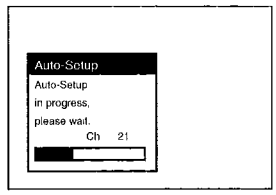
❹ Press the OK button to prepare for Auto Setup start.

❺ Press the OK button again to actually start the Auto Setup.

On Screen Display



Indication when Auto-Setup Restart is selected



Indication when Auto-Setup has started

◆ To Restart the Download (Q Link)

To perform the Download again, follow the operation steps below.

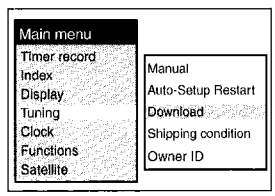
❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

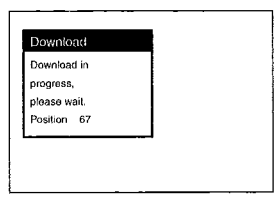
❸ Press the Cursor buttons (▲▼◄►) to select "Tuning" and "Download" in this order.

❹ Press the OK button to prepare for Download start.

❺ Press the OK button again to actually start the Download.

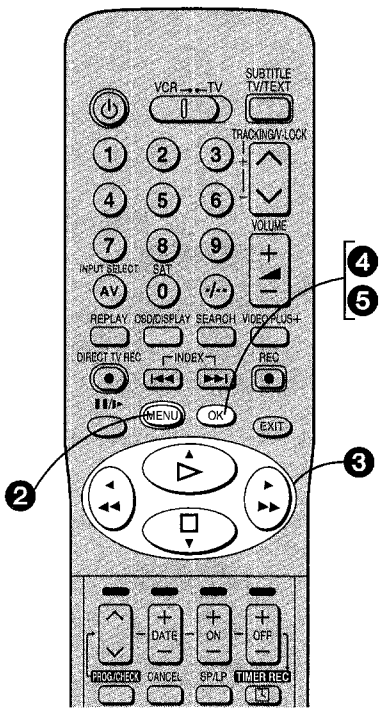


Indication when Download is selected



Indication when Download has started

Resetting the VCR to the Shipping Condition/ Changing the Owner ID



◆ To Return the VCR to the Shipping Condition

If you want to reset the VCR to the factory preset condition, follow the operation steps below.

❶ Display the VCR picture on the TV.

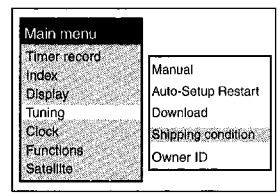
❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◀▶) to select "Tuning" and "Shipping condition" in this order.

❹ Press the OK button to prepare for resetting the VCR to the shipping condition.

❺ Press the OK button two more times to actually change the settings back to the shipping condition.
- As resetting the VCR to the shipping condition automatically resets the RF output channel to channel 21, the VCR picture may no longer appear on the TV.
- To re-tune the VCR, disconnect and reconnect the AC Mains Cable.

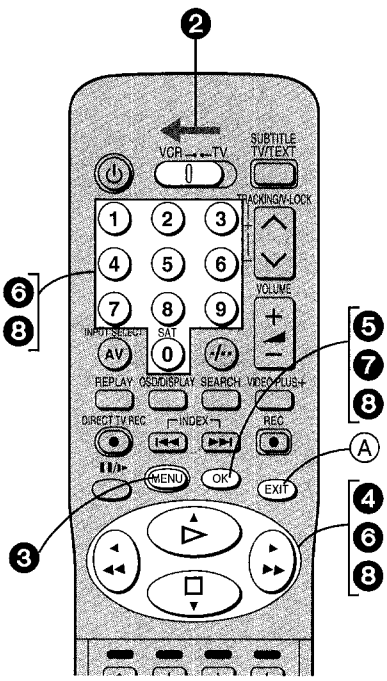
On Screen Display



Screen when Shipping condition is selected

◆ To Change the Owner ID

If you want to change the Owner ID because the owner of the VCR or your address has changed, follow the operation steps below.



❶ Display the VCR picture on the TV.

❷ Set the VCR/TV switch to "VCR".

❸ Press the MENU button to display the Main menu on the TV screen.

❹ Press the Cursor buttons (▲▼◀▶) to select "Tuning" and "Owner ID" in this order.

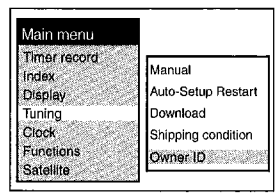
❺ Press the OK button to display the Owner ID setting menu.

❻ Use the Cursor button (▶) and Numeric buttons to enter the current PIN number.
- After entering the correct PIN number, you can change the Name, House No. and Postcode.

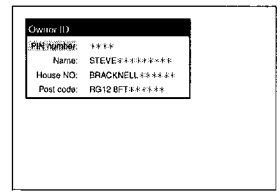
❼ Press the OK button to conclude the setting.

❽ Use the Cursor buttons (▲▼◀▶), Numeric buttons and the OK button to select and change the desired information.

On Screen Display



Indication when Owner ID is selected



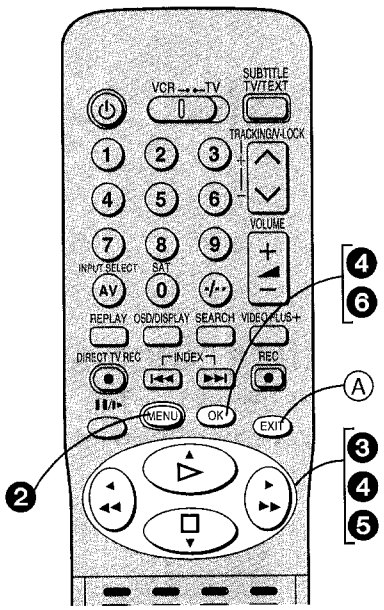
Menu for Owner ID setting

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

To display the Owner ID screen
Keep the EJECT button pressed for more than 5 seconds.
- However, the PIN number is not displayed.
- After 30 seconds, this screen automatically disappears.

Setting the VCR's Clock

Usually, the VCR's Auto Setup or Download function automatically adjusts the clock to the correct time.
Under some reception conditions, however, the VCR cannot set the clock automatically.
In this case, follow the operation steps below to manually set the clock.



◆To Manually Adjust the Clock

❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

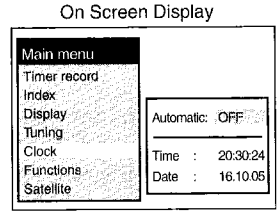
❸ Press the Cursor buttons (▲▼) to select "Clock".
- The Clock setting menu appears on the TV.

❹ Use the Cursor button (►) to move to the Clock setting menu, confirm that "Automatic" is set to "OFF", and then press the "OK" button.

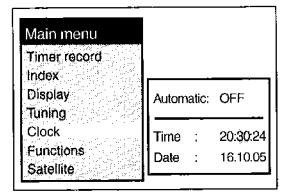
❺ Use the Cursor buttons (▲▼◄►) to set the date and time.
- Instead of the cursor buttons, you can also use the numeric buttons to set the date and time.

❻ Press the OK button to conclude the setting.

On Screen Display



Indication when "Automatic" is set to "OFF"

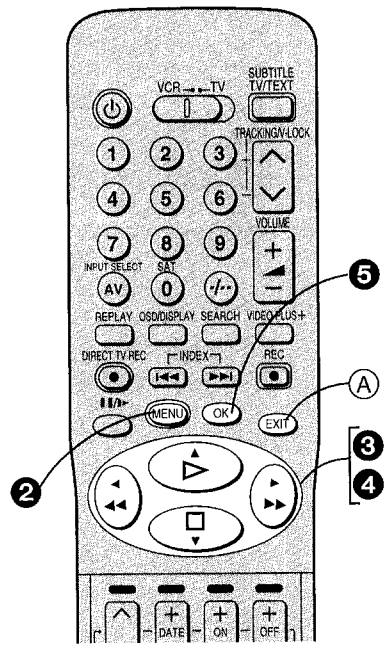


Screen for minute adjustment

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

◆To Activate the Automatic Time Correction Function

If a TV station transmits a signal for time setting, performing the operation steps below activates the Automatic time correction function and the time is corrected automatically.



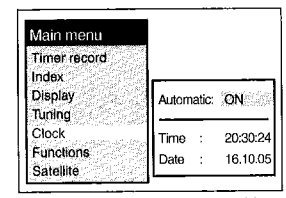
❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼) to select "Clock".
- The Clock setting menu appears on the TV.

❹ Use the Cursor button (►) to move to the Clock setting menu, and then use the Cursor buttons (▲▼) to set "Automatic" to "ON".

❺ Press the OK button to conclude the setting.
- Under adverse reception conditions, etc., the Automatic time correction function may not work. In this case, the indication for "Automatic" is automatically reset to "OFF". If the reception conditions improve later on, it may be possible to activate this function.



Indication when "Automatic" is "ON"

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

Hints:
- If "Automatic" is set to "ON" when you open the Clock setting menu, do not set it to "OFF", otherwise, the automatic time correcting function is deactivated.
- The built-in clock employs the 24-hour system.
- In case of a power failure, an automatic back-up system automatically maintains the operation of the clock for at least 60 minutes.
- When "Automatic" on the Clock setting menu is set to "ON", the automatic time correction function checks and if necessary adjusts the time every day. The automatic time correction function only works when the VCR is switched off; it does not work in the timer recording standby mode.

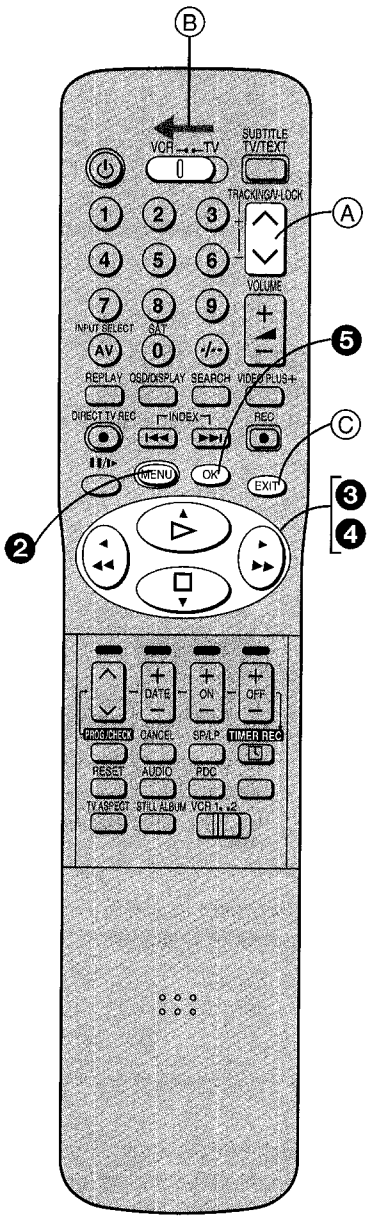
Other Convenient Functions

For optimum use of this VCR, various function settings for the items "Display" and "Functions" on the Main menu are explained below and on the following pages.

(1) For the Main menu item "Display", the following functions can be selected:
- Automatic display of the Channel Guide on the TV screen each time you change the programme position
- Automatic display on the TV screen of the TV station information, etc.
- Automatic Display of Subtitles or Closed Caption on the TV Screen
- Automatic change of the brightness of the VCR display when the VCR is switched off

(2) For the Main menu item "Functions", the following settings can be made:
- Setting of the tape length of the cassette being used to ensure correct indication of the remaining tape time
- Setting of the type of external source equipment that is connected to the "AV2" 21-pin Scart socket
- Setting of the audio mode to be used during playback
- Setting of the playback picture sharpness (sharper or softer)
- Setting of the remote control mode

To activate the above functions correctly, perform the following operations:



(1) Settings for the Main Menu Item "Display"

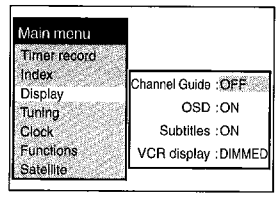
◆ For Automatic Display of the Channel Guide on the TV Screen Each Time You Change the Programme Position

❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

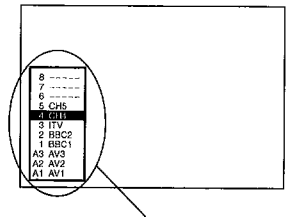
❸ Press the Cursor buttons (▲▼◀▶) to select "Display", "Channel Guide" and "ON" or "OFF" in this order.

On Screen Display



Menu for Display setting

❹ Press the Cursor buttons (▲▼) to select "ON".
- Each time you change the programme position with the Channel button (∨∧) Ⓐ, the Channel Guide indication appears for a few seconds.
  Set the VCR/TV switch to "VCR" Ⓑ.

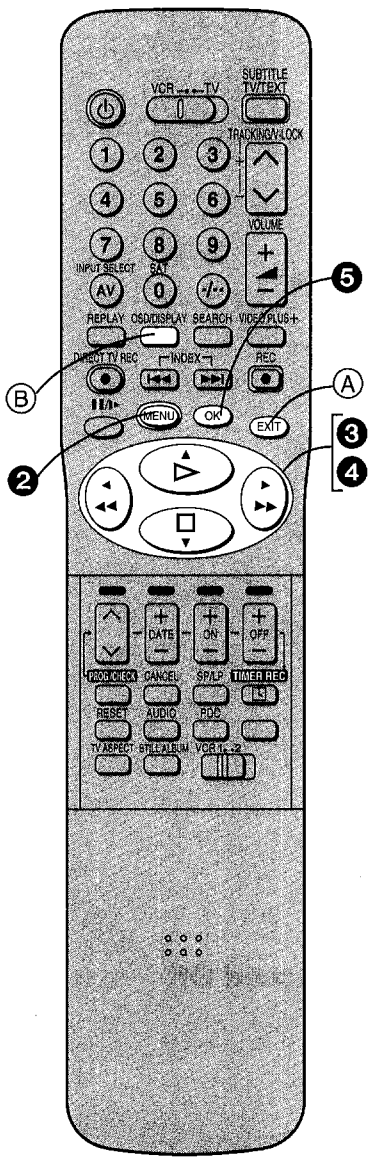


Channel Guide indication

❺ Press the OK button to conclude the setting.

To Exit the On Screen Display:
Press the EXIT button Ⓒ.

Other Convenient Functions Continued...



◆ For Automatic Display on the TV Screen of the TV Station Information, etc.

❶ Display the VCR picture on the TV.

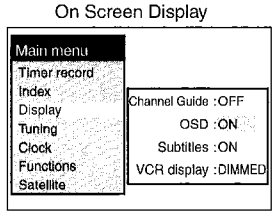
❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◀▶) to select "Display", "OSD" and "ON" or "OFF" in this order.

❹ Press the Cursor buttons (▲▼) to select "ON".
- The TV station information, type of sound system of the programme being watched and the sound playback mode are displayed on the TV screen.

❺ Press the OK button to conclude the setting.

On Screen Display



Menu for Display setting

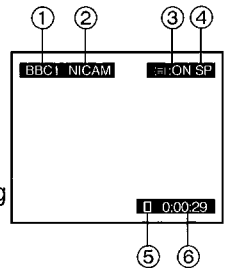
To Exit the On Screen Display:
Press the EXIT button Ⓐ.

Indications that Can Be Displayed on the TV Screen with This Function:
At a press of the OSD/DISPLAY button Ⓑ, the following indications appear on the TV screen.

① TV station name
② Automatic indication of the type of sound system in which the programme being watched (NICAM/MONO) is broadcast.
- If NICAM OFF is selected during manual tuning, "MONO" is always displayed.

③ When you press the SUBTITLE button, either of the following indications appears.
- ▤ : ON: Subtitles are displayed on the TV screen.
- ▤ : OFF: Subtitles are not displayed on the TV screen.

④ Tape speed indicator



TV screen with displayed indications

⑤ Tape running display

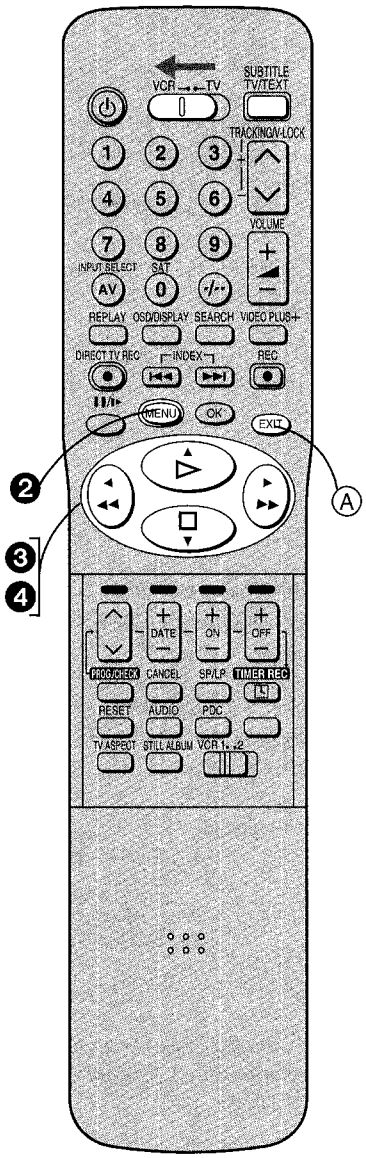
Stop, Eject	□
Rewind	◀◀
Fast Forward	▶▶
Playback	▷
Recording	●
Repeat Playback	R
Insert Editing	INSERT
AV Insert Editing	AV INSERT
Audio Dubbing	ADUB

⑥ Present time/Tape counter/Remaining tape time/Index Search/One-Touch Recording (OTR)/Playback Off Timer

Present time	17:24:31
Tape counter	−2:35.47
Remaining tape time	REMAIN 2:34
Index Search	▶▶ 02
One-Touch Recording (OTR)	OTR 60
Playback Off Timer	30

Notes:
- If "OSD" is set to "OFF", none of the above indications appear.
- None of the above indications appear during special playback.
- During playback and when the AV input for the external source is selected, indications ① and ② do not appear.

Other Convenient Functions Continued...

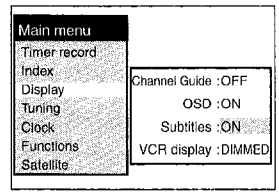


◆ For Automatic Display of Subtitles or Closed Caption on the TV Screen

❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◄►) to select "Display", "Subtitles" and the presently selected Subtitle mode ("ON" or "OFF") in this order.



❹ Press the Cursor buttons (▲▼) to select "ON".

ON: When a TV programme with subtitles is being received, or when playing back a cassette with a recording of a subtitled TV programme, the subtitles are displayed.

OFF: Subtitles or closed caption cannot be displayed on the TV screen.

- Turning the subtitles on or off is also possible by pressing the SUBTITLE button on the remote controller. This also changes the setting of "Subtitles" for "Display" on the Main menu accordingly.
- If a TV station's subtitle Teletext page number is not set correctly, subtitles cannot be recorded or played back. (See page 66.)
- When playing back damaged tapes and certain kinds of tapes, as well as in case of scrolled or rapidly moving subtitles, the subtitles or Closed Caption may not be displayed properly.
- When playing back a copy of a Close Captioned tape, the Closed Caption may not be displayed properly.

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

◆ For Automatic Change of the Brightness of the VCR Display When the VCR Is Switched Off

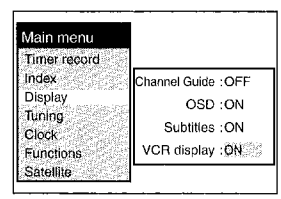
❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◄►) to select "Display", "VCR display" and "ON" or "DIMMED" in this order.

❹ Press the Cursor buttons (▲▼) to select the desired condition.

- When the VCR is switched off, the brightness of the VCR display is as follows:
  ON: Indications are brightly lit.
  DIMMED: Indications are dimly lit.



Menu for Display setting

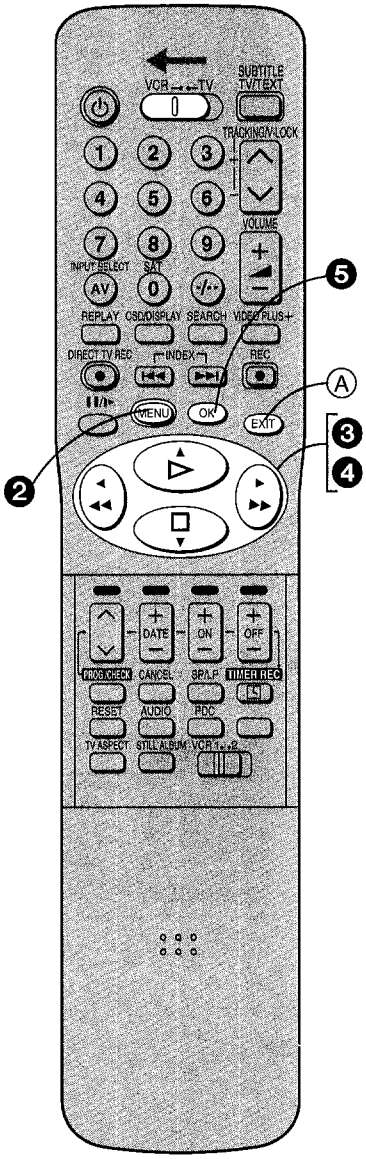
❺ Press the OK button to conclude the setting.

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

Other Convenient Functions Continued...

(2) Settings for the Main Menu Item "Functions"

◆To Set the Tape Length of the Cassette Being Used to Ensure Correct Indication of the Remaining Tape Time



❶ Display the VCR picture on the TV.

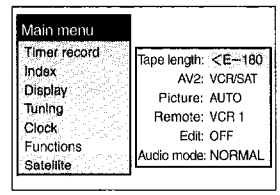
❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◀▶) to select "Functions", "Tape length" and "<E-180" in this order.

❹ Press the Cursor buttons (▲▼) to select the tape length of the cassette being used.
<E-180: For E30, -60, -90, -120 and -180 tapes
E-195: For E195 tape
E-240: For E240 tape
E-260>: For E260 and -300 tapes

❺ Press the OK button to conclude the setting.

On Screen Display



Menu for Functions setting

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

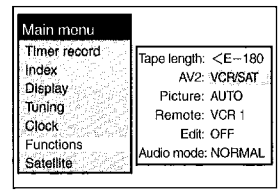
◆To Set the Type of External Source Equipment that Is Connected to the AV2 21-pin Scart Socket

❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◀▶) to select "Functions", "AV2" and "VCR/SAT" in this order.

❹ Press the Cursor buttons (▲▼) to select the type of external source equipment which is connected to the VCR's AV2 21-pin socket.
- Set the external source equipment as follows:
  VCR/SAT: When another VCR or a satellite receiver is connected
  DECODER: When a decoder is connected



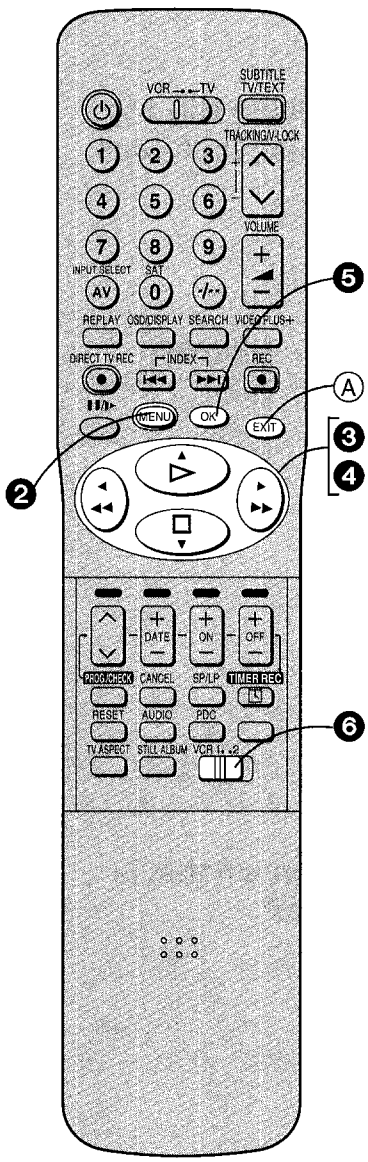
Menu for Functions setting

❺ Press the OK button to conclude the setting.

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

Note:
- Even if you have selected the correct tape length, the remaining tape time may not be indicated correctly with certain kinds of cassettes.

Other Convenient Functions Continued...

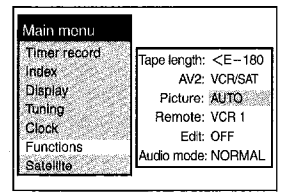


◆ To Set the Playback Picture Sharpness (Sharper or Softer)

❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◄►) to select "Functions", "Picture" and the presently selected Sharpness mode ("AUTO", "SHARP" or "SOFT") in this order.



❹ Press the Cursor buttons (▲▼) to the desired picture sharpness for playback.
Although the VCR adjusts the picture sharpness automatically, you can change it, if necessary.

AUTO: To select automatic sharpness adjustment of the playback picture
SHARP: To make the playback picture sharper
SOFT: To make the playback picture softer

❺ Press the OK button to conclude the setting.

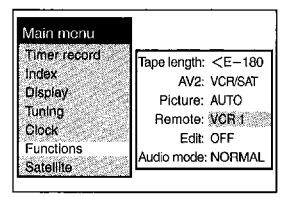
To Exit the On Screen Display:
Press the EXIT button Ⓐ.

◆ To Set the Remote Control Mode

❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◄►) to select "Functions", "Remote" and the presently selected remote control mode ("VCR1" or "VCR2") in this order.



❹ Press the Cursor buttons (▲▼) to select the desired remote control mode.

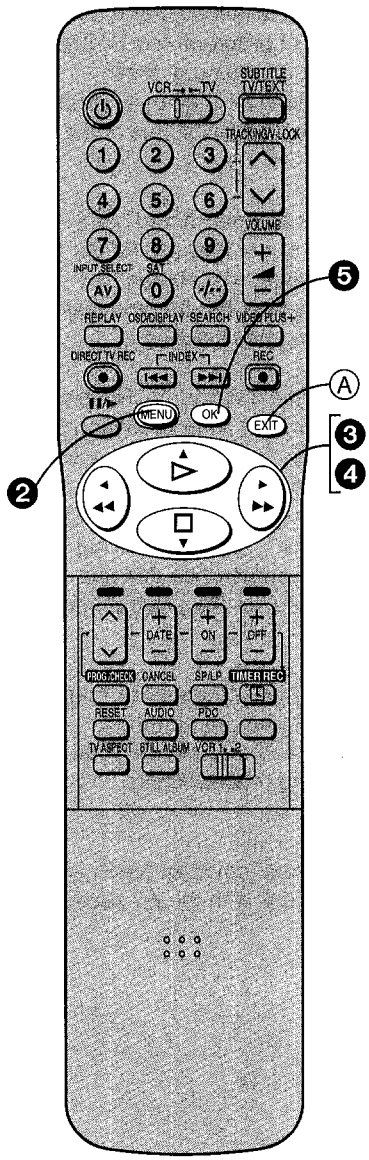
VCR1: Select this setting on both the VCR and remote control for normal use with one VCR.
VCR2: Select this setting on both the VCR and the remote control when using this VCR and another Panasonic VCR in the same place.
This ensures that you can operate both VCRs independently with their respective remote control.
It also allows you to operate both VCRs with a single remote control, simply by changing the remote control mode on the remote control.

❺ Press the OK button.

❻ To change the remote control mode on the remote control itself, change the position of the VCR1/2 switch to match the setting made in step ❹ above. If these settings are not matched, the remote control cannot be used to operate the VCR.

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

Other Convenient Functions Continued...

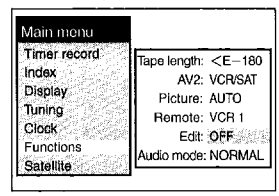


◆To Set for One-Touch Editing or Other Editing Modes

❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons(▲▼◀▶) to select "Functions", "Edit" and the presently selected Edit mode ("ON" or "OFF") in this order.



❹ Press the Cursor buttons (▲▼) to select the desired Edit mode.
ON: For One-Touch Editing (Only when this VCR is used as recording unit.)
OFF: For editing with an editing controller or for synchronized editing

❺ Press the OK button to conclude the setting.

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

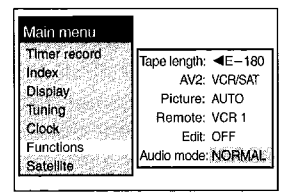
◆To Set the Audio Mode to Be Used During Playback

❶ Display the VCR picture on the TV.

❷ Press the MENU button to display the Main menu on the TV screen.

❸ Press the Cursor buttons (▲▼◀▶) to select "Functions", "Audio mode" and the presently set audio mode ("NORMAL" or "MIX") in this order.

❹ Press the Cursor buttons (▲▼) to select the type of audio mode to be used during playback.
NORMAL: Normally set to this position.
MIX: Use this setting when playing back a cassette tape on which audio dubbing has been performed. The Hi-Fi sound track with the original sound and the normal sound track (mono) with the audio-dubbed sound are played back together.



❺ Press the OK button to conclude the setting.

To Exit the On Screen Display:
Press the EXIT button Ⓐ.

Glossary

PDC (Programme Delivery Control)

What is PDC?
PDC is a special signal transmitted by certain TV stations together with the normal TV signal. This signal ensures that a TV programme which has been programmed for timer recording will be recorded precisely from beginning to end, even if it is delayed or extended compared to the published broadcasting time. Furthermore, if a programme is interrupted by a news flash, etc., the timer recording is also interrupted, and resumes when the programme restarts.

How to Use PDC?
(1) This VCR detects whether or not a TV station transmits PDC signal at the time of tuning only, and it stores this information in its memory.
If a TV station introduces or discontinues PDC transmissions later on, tuning must be performed again to update the VCR's memory.
(2) When you use VIDEO Plus+ PlusCode for timer programming, the PDC mode is automatically set to "OFF" even if the station has been memorized by the VCR as having PDC transmission.
(3) When you use VIDEO Plus+ PlusCode for timer programming for a TV station that has been memorized by the VCR as not having PDC transmission, the PDC mode is automatically set to "---" (no PDC).
(4) To perform PDC recording for a TV station that transmits PDC signals, set the PDC mode to "ON" and ensure that the start time is set exactly to the time published, for example, in newspapers, magazines, etc. If that is set correctly, the timer recording does not start.

Notes on PDC Recording:
(1) PDC recording will start several seconds before the broadcast programme commences and may stop several seconds before or after the end of the programme, depending on the control from the TV station.
(2) Normally, the programming date for a timer recording is automatically cancelled as soon as the recording is completed.
Under the following conditions, however, the programmed timer recording data will automatically be cancelled at 4 a. m. of the next day.
(a) When the VCR performs normal timer recording (without PDC control) because the PDC signal cannot be detected during PDC timer recording.
(b) When a timer recording is incomplete due to insufficient tape or cancellation by the user.
(c) If the TV station transmits a PDC signal to suspend or interrupt the recording.

In these cases, the VCR remains in the timer recording standby mode after the timer recording has been stopped.

(3) If "PDC" is manually set to "ON" for a TV station which does not transmit a PDC signal, the VCR performs normal timer recording (without PDC control).

(4) If several timer recordings have been programmed, the VCR periodically checks, when it is in the timer recording standby mode, the PDC status of programmed TV stations with PDC for any change in the start time of these programmes. However, while the VCR is actually recording a programme, it can only check the PDC status of the programme being recorded.

(5) If the actual broadcasting times of timer recordings overlap (regardless of whether or not they are PDC-controlled), the recording that starts first always has priority, and the recording of the later programme starts only after the first timer recording has finished.

(6) Some TV stations may send signals to your VCR which will change the time or date etc. for a timer recording that you have programmed with PDC. The signal automatically updates the timer programme to record at the re-scheduled time and date. When this happens, the PDC status indicator changes to "ON*". Although it is not possible to alter the timer programme once this has happened, it is still possible to delete the programme completely, if you wish to.

(7) If the name of a TV station has been changed by manual channel setting (Manual Tuning), the programmed recording may not be performed correctly even if you have set the PDC mode to "ON" during programming.

At present, PDC transmission does not cover all areas and TV stations in the UK, so please check with the broadcasters in your area for details.

One Touch Recording (OTR)

You can use this function to set the duration of a recording. When the selected recording duration has elapsed, the VCR automatically stops recording and switches off.
This function is convenient when you have to go out or want to go to bed before the recording ends.

Glossary Continued...

Q Link Function

This function works only if the VCR is connected via a fully-wired 21-pin Scart cable to a TV featuring the Q Link or similar function.
Q Link offers the following functions:

(1) Download from the TV
When you connect the VCR to a TV, the station list data is automatically copied from the TV to the VCR, and the TV stations are assigned to the programme positions on the VCR in the same order as on the TV.

(2) Direct TV Recording
By simply pressing the DIRECT TV REC button, you can at once record the same programme that you are watching on the TV.

*(3) TV/VCR Auto Switch On
Even if the TV and the VCR are off (standby mode), pressing the Play (▷), VIDEO PLUS+ or PROG./CHECK button automatically turns on both the TV and the VCR.
- When a cassette with a broken erasure prevention tab is in the VCR, it turns on and starts playback. The TV also turns on.

*(4) VCR Auto Switch Off
When you turn the TV off, the VCR is turned off as well. However, this function only works during rewinding, in the stop mode, or when no cassette is inserted.
If the VCR receives the Auto Switch Off command while it is rewinding the tape, it turns off after the rewinding has been finished.
This function does not work during the following operations:
Preset Download, Auto Setup, Auto Clock Setting and Manual Tuning.

*(5) On Screen Display Messages
When you are watching a TV programme, the following VCR messages appear on the TV screen to inform you of the VCR's condition:

Message	Message appears when:
This programme has already started	A Timer recording has just started.
Set VCR to timer standby mode	The VCR is not in the timer standby mode 10 minutes before the programmed recording start time of a timer recording (message appears every minute during these 10 minutes).
VCR is in timer standby mode	The VCR-ON/OFF(⏻), Play (▷), EJECT or SEARCH button was pressed although the VCR is in the timer standby mode.
VCR is in timer recording mode	The VCR-ON/OFF (⏻), Stop (□), REC/OTR, Pause/Still (Pause/Slow), VIDEO Plus+, AUDIO or SUBTITLE button was pressed while the VCR is in the timer recording mode.

- Depending on the type of TV used, the above message may not appear correctly.

* The above operations marked with asterisk are only available if the VCR is connected to a TV featuring the Q Link or the DATA LOGIC function.

VHS Index Search System (VISS)

A special index signal is automatically recorded at the start of each recording.
It can be used to quickly and easily find the beginning of desired programmes. After the VCR has wound the tape to the beginning of the desired programme, playback starts automatically.

Index Signals Are Automatically Recorded in the Following Cases:
- When you start a recording by pressing the REC button, REC/OTR button or DIRECT TV REC button.
- When a timer recording starts.
- When you press the REC button on the remote control during a recording.
- When you record the first scene or still picture using the Album function.

On Screen Display (OSD)

When operating this VCR, an indication of the activated VCR function is shown on the TV screen. When "OSD" on the Display menu is set to "ON", the automatic display of these indications can be activated by pressing the OSD/DISPLAY button.

Crystal View Control (CVC)

The crystal view control function ensures that you always obtain the optimum picture quality so that you get the best picture automatically.
While the VCR is turned on, the CVC indication is always displayed to show that the Crystal View Control is activated.

Glossary Continued...

NICAM Broadcasting System

This VCR features the NICAM digital sound system, a 2-channel sound broadcast system that provides either 2 high-quality stereo sound tracks or 2 independent mono sound tracks, M1 and M2.
NICAM programmes are always accompanied by standard (mono) sound broadcasts, and during playback, you can select the desired sound with the AUDIO button.

- The NICAM stereo sound can only be recorded on the Hi-Fi audio tracks.
- If, for some reason, you want to record a NICAM TV programme intentionally in mono on the Hi-Fi audio tracks, set "Nicam" to "OFF" for the programme position on which the desired programme is broadcast, as described on page 65.

Important Note on the NICAM System

When this VCR is switched on, the tuner automatically switches to a NICAM broadcast if NICAM is being transmitted. During test transmissions, it is possible that the sound received does not correspond to the picture being viewed. In order to receive synchronised sound and picture, select monaural sound with the AUDIO button or Nicam OFF setting. This applies only until NICAM transmissions are fully operational.
At present, the NICAM signal is transmitted on stereo channels only, since the M1 and M2 formats are not yet available.

Channel, Programme Position and Other Confusing Terms

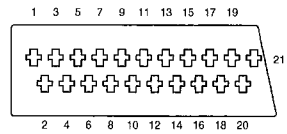
TV Station: Television broadcasting station
Station Name: The name of a TV broadcasting station
TV Channel: The actual channel (frequency) on which a broadcasting station transmits TV programmes
Programme Position:
The number on which a TV station is programmed so that it can be selected with the Numeric buttons on the remote control. This VCR has 99 programme positions.

Recording Speed SP/LP

SP stands for Standard Play. In this mode, recording or playback is possible for the duration indicated on the cassette.
LP stands for Long Play. In this mode, the recording or playback duration is double of that indicated on the cassette, however, the picture quality is slightly inferior to that of the SP mode.

21-pin Scart Socket

The 21-pin Scart socket transmits both input and output signals for picture and sound. TVs equipped with the same type of socket can be connected here.
This type of socket is also called, Peritel, Euro Connector and Euro AV.



AV1 Scart Socket (for Q Link connection)

1	Audio output CH2 (R)	12	No connection
2	Audio input CH2 (R)	13	Red ground
3	Audio output CH1 (L)	14	Blanking ground
4	Audio ground	15	Red
5	Blue ground	16	Blanking
6	Audio input CH1 (L)	17	Video output ground
7	Blue	18	Video input ground
8	Switching voltage	19	Video output
9	Green ground	20	Video input
10	Q Link data	21	Ground
11	Green		

AV2 Scart Socket

1	Audio output CH2 (R)	12	Reserved
2	Audio input CH2 (R)	13	Red ground
3	Audio output CH1 (L)	14	Blanking ground
4	Audio ground	15	Red
5	Blue ground	16	Blanking
6	Audio input CH1 (L)	17	Video output ground
7	Blue	18	Video input ground
8	Switching voltage	19	Video output
9	Green ground	20	Video input
10	Control signal	21	Ground
11	Green		

The Red, Green and Blue (RGB) video signals are looped through only from an external source unit, for example from a connected a pay-TV decoder, i.e. they are not from tape playback.

Tracking Adjustment

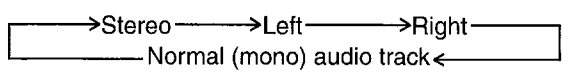
As this VCR is equipped with automatic digital tracking adjustment function which maintains optimum picture quality, manual adjustment is normally not necessary.
However, when playing back a video cassette which was recorded on a different VCR, the playback picture may contain noise bars. You can then use the manual tracking adjustment function to eliminate the noise.

V-Lock Adjustment

V stands for Vertical. With this function, you can minimise vertical jitter during still playback.

Selecting the Desired Playback Sound Track

You can select the desired playback sound tracks with the AUDIO button on the remote control. Repeatedly pressing the AUDIO button changes the audio output mode in the following order:



Before Requesting Service

Before requesting service, please check the following points.

◆ On Screen Display Messages

The error messages are given in brackets [ ].

[Please insert video tape !]

☞ You pressed the REC button (REC/OTR button), the DIRECT TV REC button, the Play button (▷), the Fast Forward button (▶▶) or the Rewind button (◀◀) when no cassette was inserted in the VCR.
Insert a video cassette.

[Please use tape with unbroken recording tab !]

☞ You pressed the REC button (REC/OTR button) or the DIRECT TV REC button when a cassette with a broken out erasure prevention tab was inserted in the VCR.
Insert a video cassette with an intact erasure prevention tab on which recording is possible.

[This action is not possible before time and date are set]

☞ You pressed the VIDEO PLUS+ button or the PROG./CHECK button, even though the time and date have not yet been set on the VCR.
Set the time and date.

[No timer programmes to be done !]

☞ You pressed the TIMER REC button even though no timer recording has been programmed.
Programme a timer recording before pressing the TIMER REC button.

[Please put VCR into stop mode first]

☞ You attempted to change the contents of the timer programming while a timer recording was being performed.
Put the VCR into the stop mode first.

> Other messages may also appear.
> Follow the instructions given on the TV screen.

◆ Self-diagnosis Indications

This VCR has a built-in self-diagnosis function. If it detects some problem during installation or during use, the following kind of indications automatically appear in the VCR display. These indications take the form of a letter followed by a 2-digit number (e.g. [H01]).

Indication
H□□
F□□
↓
Cause
A problem has occurred.
(The 2-digit number after H or F differs according to the problem which is causing the trouble.)
↓
How to remedy
Write down this self-diagnosis number and tell it to your dealer.

◆ The VCR Does Not Work Correctly.

The symptom descriptions are given between quotation marks " ".

"The VCR display is not illuminated."

☞ The AC mains lead is disconnected.
Connect the AC mains lead securely.

"The VCR display is illuminated, but the VCR cannot be operated."

☞ The VCR is in the timer recording standby mode.
Press the TIMER REC button to cancel the standby mode.

☞ Safety devices are operating.
Disconnect the AC mains lead and wait approximately 1 minute before reconnecting.
Then check if the VCR can be operated.

"The VCR picture does not appear on the TV screen."

☞ The RF output channel is set to [––].
Change the RF output channel to a channel other than [––]. (See page 9.)

"The auto clock setting does not work correctly."

☞ Teletext information is not available or cannot be read.
Set the clock manually.

"The VCR fails to operate properly."

☞ Edit cable is still connected.
Disconnect the edit cable except when performing One-Touch Editing.

"Download cannot be performed."

☞ The VCR is not connected to a TV equipped with the Q Link (or a similar) function via a fully-wired 21-pin Scart cable.
Be sure to use a fully wired 21-pin Scart cable to connect the VCR to a TV with the Q Link (or a similar) function.

◆ Playback Does Not Work Properly.

The symptom descriptions are given between quotation marks " ".

"The playback picture is distorted or in black and white. Or, horizontal noise bars appear in the picture or horizontal lines move up and down."

☞ The tracking adjustment is not correct.
Adjust the tracking. (See page 83.)

☞ The TV's video playback channel has not been tuned correctly.
Re-tune the video playback channel.

☞ The video heads are clogged or worn.
Consult your dealer for advice.

☞ The playback picture is distorted when using an E300 type video cassette that was recorded in the LP mode.
We recommend that you use video cassettes other than type E300.

Before Requesting Service Continued...

◆ Recording Is Not Possible or Does Not Work Properly.

The symptom descriptions are given between quotation marks " ".

"When recording is attempted, the ⊙⊙ indication flashes."

☞ A video cassette with a broken out erasure prevention tab is used.
Use a cassette with an intact tab, or if you want to erase the previously recorded contents on the cassette, cover the tab hole with two layers of adhesive tape.

"The playback picture of a recorded programme is distorted or no picture can be seen."

☞ The aerial or aerial lead connection is defective.
Check the connections. If the picture displayed on the TV is also distorted, there is something wrong with the installation of the aerial.

☞ No programme was recorded because the VCR is not tuned correctly.
Tune it correctly.

☞ No programme was recorded because the AV input (A1, A2 or A3) was selected on the VCR.
Select the programme position of the desired TV programme.

"Timer recording does not work correctly."

☞ Time and date are not set or they are set incorrectly.
Set the time and date correctly.

☞ The starting time or ending time of the timer recording were not programmed correctly.
Set the starting time or ending time correctly.

☞ The VCR was not put in the timer recording standby mode.
After programming a timer recording, press the TIMER REC button to put the VCR in the timer recording standby mode.

"Recording from an external source connected to the VCR's AV input cannot be made."

☞ The correct AV input (A1, A2 or A3) is not selected.
Select the correct AV input (A1, A2 or A3).

☞ The connections from the external source are not made correctly. Correct them.

◆ The Remote Control Does Not Work Correctly.

The symptom descriptions are given between quotation marks " ".

"The remote control does not work correctly."

☞ The remote control signal cannot reach the VCR.
Aim the remote control at the VCR and make sure that the infrared beam's path is not obstructed.

☞ The distance to the VCR is too long.
Use the remote control within 7 metres from the VCR. If you are using it within this range but the remote control still cannot operate the VCR, replace the batteries.

☞ The batteries are exhausted.
Replace with new batteries.

☞ The batteries have been inserted with reversed polarities (⊕/⊖).
Insert the batteries correctly. (See page 4.)

☞ The wrong remote control mode has been selected.
Set the correct control mode. (See page 76.)

☞ The VCR/TV switch is on the false position. Set the VCR/TV switch to correct position.

◆ The Satellite Receiver Cannot Be Controlled Correctly.

The symptom descriptions are given between quotation marks " ".

"The Satellite Receiver cannot be controlled."

☞ The Satellite Receiver is not connected correctly to the VCR. Connect the Satellite Receiver correctly.

☞ The settings on page 15–19 for receiving satellite broadcasts are not correct. Perform the settings on page 15–19 again correctly.

☞ The receiver in use is not on the attached list of compatible satellite receivers.These settings are supported only by the satellite receivers found on the attached list of compatible satellite receivers.

◆ The Tape Library System Does Not Work Correctly

The symptom descriptions are given between quotation marks " ".

"The Cassette Number Check has failed."

☞ The Cassette Number Check was cancelled midway.
Try to perform the Cassette Number Check again.
(See page 47.)

☞
- The inserted cassette is new (unrecorded).
- The inserted cassette was recorded on another VCR and does not have a cassette number.
- The inserted cassette was recorded on a model NV-HD685 VCR other than this unit.
- The cassette number of the inserted cassette has been deleted from the Tape Library data.

→ The Cassette Number Check is designed to fail whenever one of the above conditions applies; this is not a malfunction.

"The recorded programme has not been registered in the Tape Library data."

☞ The length of the recorded programme is less than 15 minutes.
Record for more than 15 minutes.

☞ No Tape Library data is registered when insert editing is performed in a previously recorded programme.
This is not a malfunction.

◆ The Subtitles or Closed Captions Do Not Appear On the TV Screen

☞ The subtitle Teletext page number was not set or it was set incorrectly.
Set the subtitle Teletext page number correctly.
(See page 66.)

☞ The subtitles setting is "OFF".
Set "Subtitles" to "ON" or press the SUBTITLE button on the remote control.
(See page 74.)

☞ The programme was broadcast without subtitles.
This is not a malfunction.

◆ The Titles of the TV Programmes Are Not Entered Correctly in the Tape Library Data

☞ The "Title page" Teletext page number was not set correctly. Set it correctly. (See page 67.)

Before Requesting Service Continued...

Adjusting the Playback Picture

Under normal conditions, the VCR automatically adjust the playback picture for optimum quality. However, in some cases it may be necessary to adjust it manually.

If the Picture Contains Noise Bars and It Is Not Clear to See (Tracking adjustment):
If noise bars appear during normal playback, slow playback or still playback, follow the operations below.

During normal or slow playback, press the Channel button ∨ (−) or ∧ (+) until the bars noise disappear.

- If the noise bars appear during still playback, switch the VCR over to the slow playback mode and then adjust the tracking as explained above.

TV screen

Playback picture containing noise bars

To Return to Auto Tracking:
Press the Channel buttons ∨ (−) and ∧(+) simultaneously.

If the Still Picture Scrolls Up or Down (V-Lock Adjustment):
If the still picture scrolls up or down, perform the following operations:

During still playback, keep the Channel button ∨ (−) or ∧ (+) pressed until the picture stops scrolling.

Precautions:

- With certain TV models and tapes, it may not be possible to adjust the tracking.
- If you play back a cassette that was recorded on another VCR, the picture quality may be inferior and it may be necessary to adjust the tracking. Also, on some TVs, the picture may scroll up and down in the special playback functions.
  However, these are not malfunctions.

Cautions

Please read these cautions before you operate this VCR.

Avoid Sudden Changes in Temperature

If the VCR is suddenly moved from a cold place to a warm place, condensation may form on the tape and inside the VCR. If this happened, leave the VCR to at room temperature.

Humidity and Dust

Avoid places where there is high humidity or much dust, which may cause damage to internal parts.

Do Not Obstruct the Ventilation Holes

The ventilation holes prevent abnormal increase in temperature. Do not block or cover these holes. Especially avoid covering the holes with soft materials such as cloth or paper.

Keep away from High Temperature

Keep the VCR away from extreme direct heat such as direct sunlight, heating radiators, or closed automobiles.

Avoid Magnets or Magnetized objects

Never bring a magnet or magnetized object near the VCR because it will adversely affect the performance of the VCR. Keep the VCR away from other equipment as much as possible when using it, to avoid any adverse effect on performance for both the VCR and the equipment.

No Fingers or Other Objects Inside

Touching internal parts of this VCR is dangerous, and may cause serious damage to the VCR. Do not attempt to disassemble the VCR. There are no user serviceable parts inside.

Keep Water away

Keep the VCR away from flower vases, tubs, sinks, etc. CAUTION: If liquids are spilled into the VCR, serious damage could occur. If you spill any liquid into the VCR, consult qualified service personnel.

Cleaning the VCR

Wipe the VCR with a clean, dry cloth. Never use cleaning fluid, or other chemicals. And do not use compressed air to remove dust.

Stacking

Place the VCR in a horizontal position, and do not place anything heavy on it.

Video Head Clogging

The video heads record picture signals on the tape during recording and read picture signals from the tape during playback and they are, therefore, of critical importance for the picture quality. If the VCR is used over long periods of time, these heads may become dirty and clogged. In such a case, the signals can no longer be recorded correctly, and the playback picture will be distorted accordingly. This is the case, for example, during the playback of a tape, the sound is reproduced normally, but no picture is seen, or the picture is greatly distorted. When such a symptoms occurs have the recorder checked by qualified service personnel.

Head cleaning by a service agent is not coverd by warranty.

Condensation may form in the VCR if:

- The VCR is in a room where the heater has just been turned on.
- The VCR is in a room with steam or high humidity.
- The VCR is brought from cold surroundings into a well-heated room.
- The VCR is suddenly brought from cool surroundings, such as an air-conditioned room or car, to a place which is hot and humid.

Note:
Do not operate the VCR for at least 1 hour if any of the above conditions occur.
This VCR does not incorporate a condensation sensor.

Tape Care

Some do's and dont's on tape care.

DO:
1) Use a good quality branded tape, such as Panasonic.
2) Keep in the box supplied with your tape, or a video case, when not in use.
3) Try to use all the tape on a cassette by making middle and end sections. This will avoid many repeated recordings at the beginning of the tape resulting in premature wear.
4) Take care to insert a tape correctly into the VCR to avoid damage.

DO NOT:
1) Expose the tape to high humidity or temperature.
2) Expose to liquid.
3) Expose to dust particles by storing directly on a carpet for example.
4) Use a damaged tape or attempt to repair.
5) Dismantle the cassette housing.
6) Attempt to lift the front cassette flap or touch the tape surface.

Specifications

NV-HD685B...(U.K. model)
NV-HD685BL...(EIRE model)

Power Source:	220-240 V AC 50/60 Hz
Power Consumption:	23 W

Video Recording System:	2 rotary heads, helical scanning system		
Video Heads:	4 heads		
Audio Heads:	2 heads (Hi-Fi)		
Tape Speed:	SP; 23.39 mm/s		
	LP; 11.7 mm/s		
Tape Format:	VHS tape		
Record/Playback Time:	SP; 240 min with NV-E240		
	LP; 480 min with NV-E240		
FF/REW Time:	approx. 60 s with NV-E180		
VIDEO			
Television System:	CCIR; 625 lines, 50 fields, PAL colour signal		
Modulation System:	Luminance; FM azimuth recording		
	Colour signal; converted subcarrier phase shift recording		
Input Level:	AV1/AV2;	1.0 Vp-p,	75 ohm, terminated
	VIDEO IN (AV3) (PHONO);	1.0 Vp-p,	75 ohm, terminated
Output Level:	AV1/AV2;	1.0 Vp-p,	75 ohm, terminated
	RF Modulated;	UHF channel (21-68),	75 ohm
AUDIO			
Input Level:	AV1/AV2;	−6 dBV,	more than 10 kohm
	AUDIO IN (AV3) (PHONO);	−6 dBV,	more than 10 kohm
Output Level:	AV1/AV2;	−6 dBV,	less than 1 kohm
	AUDIO OUT (PHONO);	−6 dBV,	less than 1 kohm
Audio Track:	1 track (Normal-mono only), 2 channels (Hi-Fi sound-stereo)		
Video Horizontal Resolution:	Colour; more than 240 lines (SP)		
Signal-to-Noise Ratio:	Video; more than 43 dB (SP)		
Dynamic Range:	Audio: more than 90 dB (Hi-Fi audio track)		
Audio Frequency Response:	20 Hz−20 kHz/Hi-Fi		
Wow and Flutter:	0.005% Wrms/Hi-Fi		
Operating Temperature:	5°C−40°C		
Operating Humidity:	35%−80%		
Weight:	4 kg		
Dimensions:	430 (W)×87 (H)×304 (D) mm		
Standard Accessories:	1 pc. RF Coaxial Cable		
	1 pc. Remote Control		
	2 pcs. "R6" size batteries		
	1 pc. AC mains lead		
	1 pc. Audio Cable		

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.